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THE INFLUENCE OF THE SURGERY OF THE GREAT WAR ON THE SURGERY OF CIVIL LIFE*

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It is my pleasant duty to declare open this Victory Meeting of the Section on Surgery—a privilege for which, I need not say, I am deeply grateful to you all. We are gathered here under this significant title to celebrate and commemorate the happy ending of a tremendous struggle in which many of our members took no inconspicuous part. The ending of that struggle came unexpectedly, and it is somewhat unfortunate that the Executive Committee of the section failed to consider that possibility. For, could the committee have had prevision, could it have looked even dimly into the then near future, I am sure that some one far more worthy than I, some one of more active military experience and of greater renown would stand here today as your chairman. Though such an occurrence would have been very probable and though it would have been fitting indeed, yet I can say with truth that no one, soldier or civilian, could stand here with a keener sense of the great privilege of the position or with a truer appreciation of the honor that goes with it.

But a position of prominence means little or nothing at this particular time. We are still too close to the days of peril and struggle, fear and doubt, for honor of position to have any undue weight in our thoughts. We were all cooperators in the struggle, and we are all sharers in the glory not so much of victory as of participation in the fight. Desirable as it is, victory is never absolutely necessary either to honor or to glory. After all, the finest traditions of our art were nobly upheld during the years of stress, and our greatest honor is the one common to each of us, one in which we all hold equal share—that of belonging to a profession which took an active part in the world war and stood openly on the side of right and justice almost two years before this great nation itself officially declared its intention of doing so. That in itself means enduring honor for you and me and our posterity.

We hear it reiterated that this war was fought in defense of democracy. If that be so—and I believe it is—who are more deserving, who are more worthy to be the objects of the homage and respect of the great democratic profession of medicine than those members of it who went forth and voluntarily offered themselves that the world might be a place of sunlight and not of shadow for all that we hold dear?

It is eminently fitting, then, that we give over this meeting to these men of action whose thoughts are born in experience and whose words are freighted with deeds; it is very proper that their ideas should be presented to this most democratic of American medical gatherings. This, I take it, is the real significance of the Victory Session, and in that spirit let us regard it.

It may not be amiss, however, for your chairman to offer as an introduction to the papers a very brief comment on the probable influence that the surgery of the war may have on that of civil life. It is well, perhaps, that this comment should come from one who saw but little active military service, either field or hospital, and whose ideas, therefore, like those of many of you, must arise as the result of deliberation on what is to be read or what is to be heard on the matter in question.

It is true that during the war no entirely new surgical principle was uncovered. But in this fact there is no discredit to surgery, since it is equally true that the long established principles on which surgery rests emerged triumphant from a test, the equal of which they will never meet again. Pasteur and Lister builded for all time. At no period of the war was the truth of the principles of asepsis and antisepsis in danger; their practice, however, was at first rudely shaken. The novelty of it all, the conditions of time, soil, movement, equipment both human and material, the number of wounded, their uneven distribution, the multiplicity, the extent and the severity of their lesions, the virulence and rapidity of their infections seemed about to overwhelm our methods of surgical practice. But organization of our forces, and the application of knowledge already possessed to conditions in the end adequately comprehended, finally resulted in the advent of the two great surgical developments of the war—the practice of débridement (first proposed by Colonel Gale of the British Expeditionary Force and later popularized by Lemaitre) which made possible the successful "primary closure" of contaminated wounds, and the so-called Carrel-Dakin method of treatment, through which successful secondary suture of once infected wounds was rendered feasible.

I am well aware of the arguments urged against the possibility of the successful adoption of the Carrel-Dakin method for general use in the treatment of wounds of war. I know that other antiseptics, such as flavine, dichloramin-T, bismuth iodoform petrolatum paste (bipp), etc., have very justly their warm advocates. I am convinced that the physiologic method of Sir Almroth Wright has its own good points; but nevertheless the testimony of the many men we know

* Chairman's address, read before the Section on Surgery, General and Abdominal, at the Seventieth Annual Session of the American Medical Association, Atlantic City, N. J., June, 1919.

whose surgical skill and judgment and whose powers of observation are not open to question compels us to regard the Carrel-Dakin method as one of the great accomplishments of medical science in the recent war. Many of the objections to it as a war measure fall to the ground when its use in civil hospitals is contemplated. It matters not what particular feature of the method is the potent one—whether it be the mechanical cleansing of the wound, the action, antiseptic or physiologic, of the Dakin fluid on the tissues, or the technic of its application to the wounded part—the important fact is its demonstrated effectiveness, when properly applied; of that, I believe, there can be no doubt. It is logical to assume that, as débridement comes more and more into vogue, the need of the Carrel-Dakin method in all its details will be less urgent, since débridement either does away with infection or greatly diminishes its severity.

These, then, are the two most important gifts that the recent struggle brings to the surgeon in civil life. It is obvious that their application will be far wider and more useful in the field of traumatic surgery than in that of the surgery of disease, and this fact will doubtless have a most fortunate bearing, since it will give rise to added interest and efficiency in the domain of industrial and accident surgery, which has not yet had the general attention to which it is entitled and which it is certain to demand in the very near future. We must turn our efforts from the great army of fighting men to the still greater host of industrial workers which crowds daily in and out of our mammoth industrial plants. Here is presented to us a problem similar to that of the war—less intense, perhaps, but surely of wider scope. Here are the wounded, the maimed, the broken, and here opens out to us the field wherein the gift of increased knowledge and experience that war has given us may be best applied. I do not mean to say that the surgery of disease will reap no benefit from our recent experience. I feel that it will. The good may not be great enough to be styled important; but good it will be, even if it mean only laying more emphasis on some phases of our therapy and practice, or lessening the degree of value which we have heretofore ascribed to others.

It is clear that, because of the entirely different conditions obtaining in civil life, the results of our work there must be far better than could be hoped for in the military field. Though the human material hurt and torn in war is drawn from our strongest, our most rugged, our best fitted, yet that advantage is far outweighed by the disadvantages that necessarily accompany modern warfare. The multiplicity of wounds, the delay in the application of treatment, the virulence of the accompanying infection and the extent of the tissue traumatized are seldom encountered in the ways of peace. War has brought into sharp relief the fact that the prompt application of proper treatment is the prime essential to success in traumatic surgery and that lack of it is the great contributor to disaster; it has given certainty to our opinion that mechanical cleansing of a wound has greater basic value than attempts at chemical sterilization; it has given new strength to our belief that the body tissues and fluids possess in themselves tremendous powers of resistance to infection, if only the contaminating agent and the hopelessly traumatized tissue are removed. We knew these things before the war; we apprehend them more clearly now. With this surer grasp and with the hospital conditions that exist today in almost every community in the land, our results in traumatic surgery must be far more satisfactory than ever before. Whether measured in terms of lessened human suffering or increased human efficiency or in those of economic profit and loss, the benefit to the community at large will be very great indeed.

The term "hospital conditions" prompts me to remind you that not a little of the success of surgery in the war was due to efficient hospital organization and to the practical cooperation of the clinicians in the various specialties with the workers at the laboratory desk. Team work accomplished veritable wonders, and we must not permit its great value to go unappreciated by those responsible for the conduct of our civil hospitals. Hartwell and Butler,[1] in an excellent paper read before the American Surgical Association in 1918, called attention to this fact. The activities of all departments of a hospital must be centered in the patient. The chemist, the physicist, the pathologist and the bacteriologist, quite as much and quite as truly as the clinician, must come in touch with the patient and the problem presented by the patient, else the greatest possible service will not be rendered. The results already achieved and those we have good reason to hope for in the plastic surgery of the face and jaw—maxillofacial surgery—are striking examples of what may be accomplished by surgical team work, and it must be noted by all civil surgeons interested in this field. Maxillofacial surgery is not the province of the general surgeon alone, but of the general surgeon working in conjunction with the dental surgeon, the ophthalmic surgeon, the rhinologic surgeon and the aural surgeon. Complete success is attainable only through efficient cooperation, and this lesson must be carried into our civil practice.

PREVENTION AND PRECISION

If we search for the dominant note sounded in the contribution that military surgery has brought us, it may be well expressed by the two terms "prevention" and "precision." What does débridement with its excision of all devitalized tissue, all foreign material, all denuded bone do but *prevent* the development of contamination into infection and make far less probable the dreaded appearance of tetanus, gas gangrene, etc.? What factor in it contributes more to its success than the *precision* with which it is carried out? What does the Carrel-Dakin method accomplish if not the *prevention* of impending infection or, in the event of infection, its spread? What is the keystone of its splendid arch if not the *precise* technic with which the mechanical cleansing of the wound is done, the *precision* with which the solution is prepared, and again the *precision* of its application to the open wound? On what point in the treatment of recent wounds of the joints, the chest and the brain is the military surgeon more strongly insistent than the *precision* and completeness with which the serous membrane lining the cavities must be closed after mechanical cleansing is accomplished? Always the attempt at *prevention* of disaster by *precision* in the application of the means to the end! In all this there is nothing new of principle to the surgeon in civil life. The novelty lies in the overwhelming power of the testimony to its truth.

1. Hartwell, J. A., and Butler, E. F.: The Application of the Teachings of War Surgery to Civil Hospital Conditions, Surg., Gynec. & Obst. **27**: 377 (Oct.) 1918.

ACCOMPLISHMENTS OF MILITARY SURGERY

To sum up briefly the accomplishments of recent military surgery which will affect in some degree the practice of surgery in civil life:

It has demonstrated that, even in severe wounds with existing contamination, infection can be prevented or controlled. Tetanus has practically been banished because of the preventive quality of the antitoxin. Treatment by magnesium sulphate and phenol (carbolic acid) has been definitely put aside. The wound conditions favoring the development of gas gangrene are recognized, its pathology is known, the earliest signs of its presence are tabulated and, as a consequence, its treatment is now on a more scientific and successful basis. There are promising indications that an effective antitoxin against it may be developed. There is no longer any question as to the proper treatment either in peace or in war of penetrating wounds of the abdomen. The contention of the civilian surgeon has been upheld. Many of our doubts in chest surgery have vanished. The need of complicated pressure apparatus has gone with the establishment of the fact that without it the pleural cavity may be opened freely and the lung handled with no undue danger. The final report of the studies on empyema, which was rampant in our war camps, will place the treatment of that complication in a clear light. Evidence that is convincing has established beyond doubt the position of those who in prewar days asserted that the synovial membrane had strong power of resistance to infection and that drainage of joints recently wounded is not only unnecessary but often harmful. The factors entering into the production of shock and the details of its treatment have been so vividly delineated for both the public and the profession that no surgeon who has to do with the great industries in which severe injuries are common can afford to neglect provision for the prompt and efficacious treatment of the shock that may accompany them. The treatment of fractures has been stabilized by the standardization of splints and other apparatus for immobilization. The use of plaster of Paris has been very greatly supplanted by that of the standardized splints and apparatus. Many problems in connection with the transplantation of bone will be cleared up. Methods of transportation of the injured will be improved. Decision will be forthcoming in many bothersome questions with relation to the surgery of the nerves, such as tubulization by fascia or by pieces of vein, and anastomosis by autografts or by nerve splitting. Indirectly, surgery will benefit through the stronger spirit of discipline, the more rigid practice of economy, and the more efficient measures of cooperation that will obtain in our civil hospitals.

A WARNING

A word of warning to the young medical men who entered military service and who in the discharge of their duties have had some surgical experience: Do not let the story of the days that followed the closing of the Civil War be repeated. Do not imagine that the experience acquired in military surgery, unless it be based on or followed by a thorough surgical training in a civilian hospital, warrants any man in assuming that he is an able surgeon or that he has any license to regard or conduct himself as such. I trust that these words are spoken unnecessarily; but with the experience of the past in mind, it seems wiser to say them unnecessarily than to leave them unsaid.

RESTORATION OF WOUNDED

No story of the medical aspect of the war will be complete that does not take into account the restoration and reeducation which we owe as a duty to the 80,000 broken and maimed boys that the war has given back to us. Full consideration must be given to the numerous cases of chronic osteomyelitis, of injury to peripheral nerves, and of chronic suppuration that will long people our military hospitals. We are yet too close to the days of battle to have a proper perspective of the remote influence of these conditions on civil surgery. Only when based on the study of end-results can a true evaluation of the worth of any surgical procedure be had; for that reason, it is obvious that some conclusions can as yet be held only tentatively—a point that deserves more emphasis than can be given to it in so brief a communication as this.

PHYSICAL TRAINING

Quite as interesting a problem is that suggested by the fact that in the state of Massachusetts more than 40 per cent. of the men called in the first draft were rejected as physically unfit and that thousands of boys from the country at large were accepted and sent overseas only to be found unsuitable for active service because of their physical defects. Such a condition should not obtain in this country. To whom will the nation look, if not to us, for the plan of some sort of physical training that will prevent the continuation of such an undesirable state of affairs? Less could not be asked or expected of a profession that has always given proof of its firm belief in the worth and sacredness of human life and in the value of bodily health and soundness.

THE CORRELATION OF LABORATORY AND CLINICAL TEACHING IN SURGERY

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No one can come into close contact with medical students without becoming impressed by the constant complaint that the laboratory subjects are not taught from the practical standpoint. Many of the students who have just completed academic courses in which much that has occupied their time has, to their minds, had no direct economic value, enter the professional schools with a determination to employ every moment to best advantage. They are restive under the restraints of the first two laboratory years. For example, many feel that much time in anatomy is wasted, and unfortunately they are too often strengthened in this opinion by the expressed views of some of the less thoughtful teachers in the laboratory and clinical branches. It is the failure to demonstrate to the student the real value of the subject taught, and the failure of the teachers to appreciate the importance of the subject-matter itself, which causes discontent. In consequence, there is danger that the teaching in the laboratory branches may depart from the well established and correct method of presenting the subject-matter so that the student learns by personal observa-

tion, always a slow, laborious process, but the only one which rests on a permanent, firm foundation.

On the other hand, no such complaint is heard of the clinical branches. Any and every subject, however presented, is considered worthy of profound study if it only deal with a condition to which the human flesh is heir; but oftentimes the teaching does not follow the more advanced and best recognized methods, and the students are graduated with a theoretical knowledge of these subjects, dependent on the faculty to memorize the written word, and quite untrained in powers of observation, deficient in ability of deduction from facts gained through the impressions of their five senses, and incapable of expressing in the English language the results of such mental processes as they may possess.

The teaching of surgery has very largely depended on lectures to fairly large groups of students. These lectures were of two kinds, the theoretical, and the clinical lecture, or demonstration. They differ from one another only slightly. In the one a subject is arbitrarily chosen and talked about; in the other the patient determines the subject. Such teaching had great advantages when there were few good textbooks or adequate monographs available to the student, since it enabled him to hear the views of the leaders of the profession; but today, with the many books and widely circulated and readily accessible magazines, these presentations to large groups are antiquated. The theoretical lecture may still serve three useful purposes: first, to arrange and correlate facts for the student into a well ordered, well balanced whole (but even this could probably be accomplished better by a printed article); second, to settle disputed points on subjects about which there exists an honest difference of opinion among the leaders of surgical thought (the student being incapable of weighing the evidence for reaching a decision, and thus a discussion by a learned teacher often proving enlightening); and third, to impart new facts which the student could learn only through wide reading of current literature, for which he would not have the time. Except for these purposes lecturing should be abandoned.

Surgery lends itself well to the modern principles of teaching, which, if followed, would result in a decided modification of the method of conducting courses hitherto given in our schools. The student must gain his knowledge through the use of all his senses, and have the acquisition take place over a long period of time, with the repetition of those impressions occurring without a sense of fatigue. We must associate the various stages of a disease by constantly rejuvenating past memory pictures in connection with present conditions, thus coordinating the widely differing appearances in the course of a disease, and must also demonstrate the connection of cause and effect. We must, therefore, be able to control our demonstration material. This is possible only by the employment of animals. With these purposes in view we have planned the course at Columbia University as follows:

During the first half of the second year a series of demonstrations are given to small sections of the class, in which they study the application of physiology to the various surgical problems that they will meet later. Normal functions are presented and considered from the clinician's standpoint. For example, the recent work of Graham and Bell[1] on the mechanics of the thoracic cavity and of pneumothorax is based on the application of physics to physiology, and this is exhaustively demonstrated and the problem explained in detail.

In this way atmospheric pressure, negative pressure and a vacuum become real entities, things that will have to be reckoned with in the treatment of disease, and they immediately cease to be intangible, indefinite somethings, dimly associated with mercury columns in glass tubes, Sprengel air-pumps, glass bell jars, and 15 pounds to the square inch. These should be demonstrated on living animals, their importance in connection with thoracotomy should be emphasized, and the student should gain a knowledge of them by employing all his senses. Thus he will form a lasting memory picture to be used when he requires it in connection with his study of empyema or other diseases of the pleura and lung. Other subjects taken up are the series of classical demonstrations by Cushing[2] of the effects of intracerebral pressure on the blood pressure, pulse and respiration. The nervous system is further studied by repeating Sherrington's[3] epoch-making experiments of unipolar stimulation of the motor cortex of the brain, and, in addition, the confirmation of cortical localization by extirpation of portions of the cortex of the ascending frontal convolution.

The peritoneal cavity is considered from the standpoint of absorption and drainage, and the properties and peculiarities of the peritoneum and omentum are shown, especially their reaction to foreign bodies. The results of the brilliant and illuminating work of Cannon[4] on intestinal peristalsis and stomach function, as shown by fluoroscopy, is utilized to give the student a basis for knowledge of visceral function. In these demonstrations the students act in turn as assistants.

In the second half of the second year the student commences his consideration of true surgical conditions. A simple wound is chosen. He makes such a wound on an animal and watches it heal. From time to time a section of such a wound is taken and studied under the microscope. He thus associates the histology with the extremely important element of time. He sees what changes take place in the blood clot, he learns when the fibroblasts first appear, understands the formation of granulation tissue, and thus gains a rational conception on which to base the after-care of such a lesion. Similar wounds on patients from the clinic are then demonstrated, a few representative cases being shown, and from the many microscopic slides, laboriously collected for years past by Dr. W. C. Clarke, appropriate ones are demonstrated and thus the histologic changes are associated with the clinical appearance. At first a simple incised wound of the skin and subcutaneous tissue is studied, and later the healing process in wounds as it occurs in the various other tissues, muscles, aponeuroses, bones, intestines, liver, spleen, kidneys, etc., is demonstrated. After this simple healing process is learned, the changes or accidents incidental to healing are studied in the same manner; for example, healing under a scab, pyogenic

1. Graham, E. A., and Bell, R. D.: Open Pneumothorax: Its Relation to the Treatment of Empyema, Am. J. M. Sc. **156**: 839-872, 1918.

2. Cushing: Some Experimental and Clinical Observations Concerning States of Increased Intracranial Tension, Am. J. M. Sc. **124**: 375, 1902.

3. Sherrington and Grunbaum: Observations on the Physiology of the Cerebral Cortex of Some of the Higher Apes, Proc. Roy. Soc. **69**: 1901.

4. Cannon, W. B.: The Movements of the Stomach Studied by Means of the Roentgen Rays, Am. J. Physiol. **1**: 359-382; The Movements of the Intestines Studied by Means of the Roentgen Rays, Am. J. Physiol. **6**: 251-277; Peristalsis Segmentation and the Myenteric Reflex Am. J. Physiol. **30**: 114-128.

infections, specific infection, etc. In every instance the student either makes the lesion on an animal or he sees it made and then watches that same lesion day after day and studies and observes its phases and changes as they occur. This is supplemented by lantern slide demonstrations of similar lesions in human beings, and the study of microscopic slides.

In the third year the study of special surgery begins. No attempt is made to cover the entire field. All we hope to do is to take up a few of the most important subjects, and to demonstrate the correct method of learning about a disease. We trust to the student by his reading to inform himself on the myriad of others. We educate him so far as to be able to study surgical literature intelligently. We do not attempt, because we believe it impossible, to give him an encyclopedic knowledge of surgical affections.

The following subjects have been selected because of their importance and of the possibility of demonstrating them on animals: peritonitis, appendicitis, diseases of the gallbladder and gallducts and abscess of the liver, diseases of the pancreas, acute ileus, hydronephrosis, abscess of the kidney, diseases of the ductless glands, empyema, and osteomyelitis.

Each subject must be presented in a special manner, and an intimate knowledge of how each condition develops in the animal is required. The choice of the species of animal best adapted to the development of the disease to be demonstrated is an important element of success. The time element is such an important factor that a careful curriculum of the student's time schedule must be obtained. This has been made possible at Columbia by a cordial cooperation of the faculty and the dean. The surgical course is arranged so that three mornings from 9 o'clock to 1 are available—Tuesday, Wednesday and Friday.

Each subject is studied in quite the same manner. The class is divided into groups of ten, an instructor is assigned to each group, and the entire class is taught at the same time. As an example I shall explain in detail how appendicitis is studied.

There is an anesthetized dog for each group of ten students. The instructor, assisted by one of the class, opens the abdomen under the rigid asepsis of modern technic, delivers the cecum into the wound and places a purse string suture about the base of the cecal pouch in such a manner as not to interfere with its blood supply, and yet to isolate that portion of the intestinal canal from the rest and thus to prevent anything introduced into its lumen from passing into the colon. He then makes an opening in the pouch 0.5 cm. long and introduces a small gauze tampon saturated with a pure culture of *Streptococcus hemolyticus*[5] into its lumen, and scarifies the mucous membrane lining with a scalpel. He then closes the opening with a purse-string suture and drops it into the abdomen and closes the abdominal wound. The student assistant then writes in the history a description of the procedure. As we have about ten sections in our classes, we have ten animals that receive identical treatment.

The students are instructed to watch the animals in their cages in the hospital and the assistant at the operation records notes as to changes in the dog's condition, keeps a temperature chart and does a daily blood count. After forty-eight hours, four of the animals are killed and a necropsy is performed immediately; we thus have one animal for each group of twenty-five men. The condition found at this time will be a well established florid inflammation in the cecal pouch, which will be wrapped about with omentum greatly swollen and inflamed, and in addition a well marked local peritonitis, or at times a localized abscess. The student thus sees the cause and effect. He records a memory picture of the reaction of the peritoneum to bacterial invasion. Four of the remaining animals are operated on under strict asepsis, a student acting as assistant. The cecal pouch is removed and a rubber tube drain is placed down to the site of the necrosed tissue in two of the dogs, and the other two are sewn up tight. On the following day, seventy-two hours after the first procedure, the two remaining dogs that have not been operated on are killed and necropsies performed immediately afterward. At this time a widespread, diffuse, and, at times generalized peritonitis of a virulent character is demonstrated. The dogs that have been operated on are also killed at this time, and the adhesions about the drainage tubes, the recovery of the remainder of the peritoneum, in fact, the effect of removal of the focus of infection and the good results of drainage are demonstrated. The outcome of the treatment in the animals in which the focus of infection was removed and the abdomen immediately closed will depend on the type of peritonitis present at the time of the operation. At times perfect recovery of the peritoneum may be shown, while in other cases the peritonitis has progressed and become diffuse and generalized.

During this entire period of observation the student makes blood counts and keeps the history, recording appropriate notes. At the necropsy he takes bacterial smears and cultures, writes a description of the findings and takes portions of the organs and tissues, which are sectioned and mounted, and which he studies at a subsequent exercise. A large bulletin board divided in squares is placed in the laboratory, and each space is devoted to a subject or disease. Here is posted by the instructors, from time to time, lists for collateral reading, any special features to be noted in the postoperative animals in the hospital, and such other data as may be pertinent to running the course. After these demonstrations, a conference is held on appendicitis, and the subject is discussed from the standpoint of its incidence in man, the student having read some work assigned to him covering the subject. Each subject is presented in a similar manner, some requiring weeks and, in cases of bone lesions, months for their complete development. During this period the student watches the animal, makes notes and records observations, and we believe this time element is one of the most important features of the method. It impresses on the student's mind the idea of the course of a disease. It gives him the first inkling of the difference between the word acute and chronic.

In addition to these subjects there are a number of very important ones which must also be taught, but which do not lend themselves well to animal demonstration. These are neoplasms of all kinds, affections of the female mammary gland, affections of the stomach and intestines. In these we have adopted a different method of presentation. The class is divided into groups of ten men, and conferences are held in which the students carry on the exercise as much as

5. From experience we have found that more uniform results are obtained with this organism than with others. We have employed Bacillus aerogenes-capsulatus and Staphylococcus aureus, but our results varied widely and for demonstration purposes were not sufficiently uniform.

possible under the supervision of the instructor, correcting one another and answering each other's questions. Coincident with these conferences an attempt is made to demonstrate cases which illustrate the disease under discussion, and pathologic specimens of the various lesions are shown.

A course in fractures of the bones of the extremities is managed by combining clinical work on patients by small sections of students with theoretical conferences. Cases are shown the student and he follows them from beginning to end, week after week. On other days conferences are held and the subject discussed at length. Here a textbook is employed and we attempt to regulate the student's reading, to train him to connect his reading with his clinical experience. In this course we have a sharp contrast with the animal experimental course. Here we emphasize the importance of enlarging our store of facts by study of the written word, and show how knowledge acquired in this way may be made use of at the bedside or in the dispensary. We consider fractures of the bones of the extremities particularly well suited for this purpose, as the history is usually clear cut and pertinent as to details, the symptomatology is direct and striking, and the physical signs are demonstrable and readily appreciated, while the treatment, being mechanical, appeals to the simple, untutored intelligence of a beginner. No attempt is made to demonstrate every form of fracture or everything about any special kind of fracture, but a sufficient number of cases are demonstrated and followed to make the student familiar with changes common to fractures, and so in his studies his reading may be carried on intelligently.

A course in minor surgery is also given—two days a week for the entire year. The class is again divided into small sections for its clinical work, and twice a week a limited number of cases are studied. One case is taken by two men, who work it up carefully in all the details and present it to the section, when an informal discussion of the case is carried on, the many details presented by the student being commented on by the instructor. The simpler class of cases is chosen at first. The object being to drill the student in methods of examination, history taking, clinical pathology and then to arrive at a diagnosis and to outline and carry out the treatment, minor operations are performed before the student, and bandages and dressings are applied by him.

At the end of the third year, during the last eight weeks, the entire class returns to the dissecting room and takes up the study of anatomy of the extremities by dissections, demonstrations and conference, during which period the course in orthopedic surgery is begun and the study of joint anatomy and function, and the application of muscle anatomy to muscle function, are studied. Clinical lectures and demonstrations to small groups are given twice a week. These are correlated with the work in the dissecting room in order to bring out the intimate connection between anatomy and orthopedics and fractures.

In the fourth year the class is divided into small groups and bedside instruction is given. The student spends all day in the hospital, and so is able to study the cases before operation. He may be present at the operation and then follow the case during the postoperative course. He has the opportunity of examining the pathology of the specimens removed and of doing the clinical pathologic tests. During his stay in the hospital he is given a short course in cystoscopy, during which he has the opportunity of examining bladders through the cystoscope, and by lantern slides he is shown examples of the commoner lesions.

Once a week patients presenting postoperative cases are taken to the amphitheater and the treatment is discussed before the entire class, the wounds are dressed and special stress is laid on the question of drainage, abdominal, thoracic, and of the soft parts. As many complications are shown as occur on the service; in fact, the cases which do badly are taken up at these conferences and freely discussed.

In this course a determined effort has been made to depart from the old theoretical lecture or large clinical lecture, which differ from one another only in that a patient serves as a text in the one, while in the other the subject is chosen beforehand. Here the ear is about the only sense which is appealed to, possibly to a slight extent the eye, but smell and feeling are not called on to register memory impressions and much of the value of the study of diseases is lost.

An attempt has been made to fashion the teaching of surgery along the lines of modern ideas in the psycology of learning, to conform to the three laws of readiness, exercise and effect, so ably expounded by Thorndike,[6] who, in his analysis, has so convincingly demonstrated that synapses between neurons are not only the anatomic but indeed the physiologic basis of behavior, and that these may be strengthened or weakened according to the above laws.

A REPORT OF A WARD EPIDEMIC OF MENINGOCOCCUS MENINGITIS

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During the present emergency an exceptional opportunity for the study of acute infectious diseases has presented itself. Many things have come to light since the well equipped laboratory and the patients have been brought together under military control. The study of meningococcus meningitis has held one of the central places of interest, not only on account of its frightful course when untreated, but also because of the progress that has been made in its study. The old conception of the disease as being primarily an infection of the meninges is now untenable in the face of recent laboratory and clinical findings. The disease may be better understood by regarding it as a bacteremia. This change of view has led to a more effectual method of treatment, that is, the combined intravenous and intraspinal administrations of serum.

In times past so little attention has been paid to the infectious nature of the disease that the patients were taken care of in a general medical ward. In the military establishments, however, great stress has been made on the infectious nature of meningococcus meningitis. The cases have been carefully isolated, contacts watched, ward attendants instructed to wear gowns and masks and a careful search for carriers made. The carrying out of this program has entailed not a little expense to the government. The report of a ward epidemic, though very small, is of considerable

6. Thorndike, Edward Lee: Educational Psychology, Ed. 2, New York, Teachers' College, 1910.

importance in showing the real practical necessity for the wise precautions taken to prevent the development and spread of the disease.

REPORT OF WARD EPIDEMIC

Sept. 27, 1918, Ward E-1, a general medical ward, was converted into a pneumonia ward to accommodate the increasing number of pneumonia cases that developed during the epidemic of influenza. The ward contained thirty-two beds; the prescribed amount of air space and the cubicle isolation system were employed. There was practically no porch space, since the side and end porches were used as covered ways, thereby making the ward darker than usual. Additional nurses and corps men were assigned to the ward. September 27, sixteen patients were admitted and by the 30th the ward was full.

October 7, at 7 p. m., ten days after the conversion of the ward, one case of meningococcus meningitis developed, followed by three the next day and two on the day following. The last case was diagnosed, October 8, at 9 p. m., thus making six cases to develop

DATA IN EIGHT CASES OF MENINGOCOCCUS MENINGITIS

Case Number	Days in Ward	Signs Establishing Original Diagnosis								Later Confirmation			Treatment		Result
		Erythematous Rash	Petechial Spots	Psychic Changes	Headache	Nausea and Vomiting	Stiff Neck	Increased Reflexes	Asymmetrical Reflexes	Lumbar Puncture	Lumbar Puncture	Blood Culture	Type of Organism	Intraspinal Serum	Intravenous Serum	
1	10	+	+	+	0	+	+	0	+	+	+	0	IV	153	370	Recovered
2	10	+	+	+	+	+	+	0	+	+	+	+	..	..	100	Died
3	7	+	0	+	0	0	+	0	+	+	+	0	..	145	634	Died
4	7	0	0	+	0	0	0	0	0	+	+	0	..	120	365	Recovered
5	13	0	0	+	+	0	0	0	0	+	+	0	..	20	100	Died
6	10	0	+	+	0	0	0	+	0	+	+	0	..	300	1,250	3 relapses, recovered
7	18	+	+	+	+	+	+	0	+	+	+	+	IV	165	205	Recovered
8	26	+	+	+	0	0	0	+	+	0	+	+	IV	60	370	Recovered

Case 4 was transferred to a convalescent ward, where he developed the disease. Case 8 developed pneumonia in the ward September 27.

within a period of fifty hours. This group will, for convenience, be called the bed series. October 18, at 11 a. m., and October 21, at 8 a. m., respectively, two more cases developed within forty-five hours of each other. The two cases will be called the ambulant series.

After the development of the first case, all patients were examined for suggestive signs. As soon as any one thing was found, a tag, with the symptoms written on it, was attached to the foot of the bed and the suspects were carefully watched. All the patients in the ward were examined four times a day until two weeks had elapsed after the first case occurred. The ward attendants were instructed to look especially for rashes, changes in mental attitude, stiff necks, nausea and vomiting. The ward was quarantined. All attendants and ambulant patients wore gauze masks. As soon as a positive diagnosis was made, 1 c.c. of antimeningococcus serum was given subcutaneously for desensitization, and the patient immediately transferred to the meningitis ward.

A search for the source of the infection disclosed the fact that none of the unfortunates had, to their knowledge, been exposed by contact to any meningitis prior to their admission to the ward. Throat cultures were immediately made of all the ward attendants, and patients, three cultures each for the attendants, and two each for the patients. October 8, the day following the outbreak, while preparing a patient for a lumbar puncture, one of the newly assigned corps men displayed an unusual amount of intelligence in the manipulation of the patient. On being questioned, it was learned that he had himself been a victim of the disease during the preceding winter and had worked as an attendant in the meningitis ward for some time afterward. The only positive culture found, from all those taken, was that from the corps man mentioned above. This organism was agglutinated by polyvalent serum, but unfortunately was not typed. The carrier suspect was immediately transferred to the meningitis ward, where treatment was instituted to rid his nasopharynx of the organism. Further attempts to find a positive culture in this person were unsuccessful.

The patients of the bed series were confined to bed during their entire stay in the ward, the only contact being with the ward attendants and a very few occasional visitors, who had to do only with the particular patient they came to see. Patient 2, a nurse, who is being counted in the bed series, was on duty for ten days in the ward. She came in contact with the night force, as it was a habit of the day nurses to stay on duty after hours, during the emergency, until they were actually ordered off the ward by the ward surgeon. It is fair to count this case in the bed series, since this patient went off duty at 12 (noon), October 7, and died at 10 o'clock the following morning, with the fulminating type of the disease. The two patients in the ambulant series were up and about during the time when the first group sickened with the disease and were thereby exposed to the carrier and the other patients. The patients were scattered all over the ward, only in two cases occupying adjacent beds. All the cultures that were successfully typed were of the same group; one case, however, in which both the blood and spinal fluid were typed, showed a difference in type. Only three cultures attained sufficient growth for typing.

PROBABLE PERIOD OF INCUBATION

A slight amount of information as to the period of incubation of this disease is shown by the fact that each group of cases developed within a period of fifty hours of each other, the bed patients coming on from seven to thirteen days after exposure to the carrier, and the ambulant patients developing the disease from eighteen to twenty-one days after exposure to the carrier, or from nine to fourteen days after exposure to the other patients. This would indicate that the incubation period is between one and two weeks. It is important to note that the disease in the two patients in the latter group ran a much milder course; this probably means that these persons contracted the disease from the bed patients, thus lending weight to the doctrine of attenuated virulence by passage through another individual.

CONCLUSION

1. A ward epidemic of eight cases of meningococcus meningitis is reported.

2. The tracing of the epidemic to a carrier is reported.

3. The carrier presents a really important problem and must not be disregarded.

4. The importance of observing contacts is emphasized.

5. A suggestion is made that the possible period of incubation of the disease is from seven to fourteen days.

6. Fourteen days is recommended as a quarantine period for meningitis contacts.

EMPYEMA AT BASE HOSPITAL, CAMP SHERMAN, OHIO

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On entering service at any of the base hospitals of the United States in the winter or spring of 1918, one was immediately impressed by the prevalence of disease due to transmission of infections through the medium of secretions from the mouth and nose. The most serious of these infections was pneumonia, and the most serious complication of pneumonia was empyema. Men of long professional experience were impressed with the idea that the principles acquired in civil practice concerning the treatment of empyema were not applicable to the type of disease encountered in military camps. There was often considerable difference of opinion between members of the surgical service as to the proper methods of treatment, and still more often differences in opinion between the medical and the surgical services as to how these cases should be managed. This condition of things existed at the base hospital, Camp Sherman, Ohio, owing to the fact that the surgical service at that time believed in early operations; but so many of the patients died soon after operation that the medical service discontinued transferring patients, and, in some instances, went to the other extreme and delayed operation too long.

In October, 1918, when the influenza epidemic was at its height, it became apparent that it would be followed by many cases of empyema, and, as the final decision concerning the surgical treatment to be employed would devolve on me, I undertook the study of the cases treated prior to July 1, 1918. This study disclosed that fifty-three patients had been treated in the surgical service, with twenty-three deaths; simple thoracotomy had been performed forty-nine times, and rib resection four times.

RESULTS OF OPEN DRAINAGE TREATMENT

All were treated with open drainage and the instillation of surgical solution of chlorinated soda (Dakin's solution), under the supervision of a surgeon, eminent in civil life, who was fresh from a course of instruction at the Rockefeller Institute. These patients were sick for a long time, and eventually the use of Dakin's solution was discontinued, and instillations of 2 per cent. formaldehyd solution in glycerin (containing approximately 0.07 per cent. of absolute formaldehyd) were substituted. Immediate improvement took place, the septic condition disappeared, the patients put on flesh, and it was confidently expected that they would speedily recover. This group of cases formed the basis of the article by Lieut.-Col. J. G. Sherrill,[1] published in April, 1919, but written in the summer of 1918, and at that time submitted to this service for review. Sherrill was an accurate observer, and his conclusions were justified by the condition of the patients at that time and were indorsed by all of us. Subsequent experience with this series of cases, further study of bacteriologic findings, and experience in the use of chemical antiseptics, including formaldehyd glycerin solution, in another series brought us to a far different conclusion. The query naturally arises concerning the numerous reports from other hospitals on this subject as to how many of them would have retained their reported opinions had they reserved their reports until the completion of a given series of cases. When Sherrill was transferred from this hospital, all the patients who had been under his care had apparently recovered.

Fifteen patients recovered under the use of Dakin's solution and were discharged. Fifteen remained under treatment after the change was made to formaldehyd glycerin solution. The wounds closed in four patients who were returned to duty and not heard from again at this hospital. In five of the remaining eleven, the wounds also closed and these patients were discharged, but in a few weeks were readmitted with reopened sinuses leading into the pleural cavity. During August, these eleven patients were subjected to costatectomy, after a study of their chests in the roentgen-ray laboratory. This was done by passing a small catheter through the sinus and introducing a solution of potassium iodid. This procedure outlined the cavity as viewed through the fluoroscope. In each case large quantities of partially organized lymph and pus were found in the pleural cavity. One of the patients died a month after the operation from acute infection of the opposite lung. Three had connections between the bronchi and the pleura and were transferred to a general hospital, where two recovered and one died from pneumonia in October, which made the final results twenty-five deaths in fifty-three cases. Two patients are still in the hospital after more than a year, and each presents a small sinus through the thoracic wall. Each has had several operations for the purpose of collapsing the chest wall, and at present is convalescing and will soon be ready for discharge.

TABLE 1.—MORTALITY BASED ON TIME OF OPERATIONS

	No.
Deaths: Those operated on prior to the eleventh day after development of pneumonia	7
From twelve to twenty-four days	5
From thirty-one to fifty-five days	11
Recoveries: Tenth day	1
Eleventh day	1
Twelfth to twenty-fourth day	19
From twenty-eighth to sixty-first day	10

The lowest mortality occurred in the period in which operation was performed from within twelve to twenty-four days after the development of pneumonia; and in the period exending beyond the thirtieth day, the mortality was approximately 50 per cent.

The bacteriologic findings in this series of cases were pneumonia from pneumococcus Type IV. In the pleural fluid a nonhemolytic streptococcus was found in the majority of the cases. Five presented *Streptococcus hemolyticus* in the pleural fluid.

RESULTS OF TREATMENT BY ASPIRATION

The medical service experimented with aspiration and instillation of formaldehyd glycerin solution, and a few members of that service in May and June, 1918,

1. Sherrill, J. G.: Observations on Empyema, Surg., Gynec. & Obst. 28: 371 (April) 1919.

were enthusiastic concerning this treatment. Two patients were reported as having recovered without other treatment. Since that time the medical service has experimented with simple aspiration, repeated at intervals of three days with results quite as satisfactory as those obtained in the use of formaldehyd glycerin. The chief of that service informs me that he is now fully satisfied that when pus forms it should be evacuated from the pleural cavity under the same surgical rules that govern its treatment in other regions of the body.

In arranging for the treatment of prospective empyemas early in October, 1918, conferences were held with the chief of the medical service and with the members of the surgical service who had had experience in handling the disease in this hospital during the previous year. A course of procedure was agreed on, and in subsequent proceedings the two services operated in harmony. It was decided that in the early treatment, aspiration and instillation of formaldehyd glycerin solution be given a fair trial. It was also agreed that the chest should not be opened in the early stages of the disease. The use of the aspirator in our first cases soon convinced us that this was not an entirely harmless procedure. Several patients with chests full of fluid and with quiescent pneumonia developed severe pain immediately after removal of seropurulent fluid with the aspirator. In one case the pneumonia again became active. The pleuritic fluid did not reform, and the patient died. The instillation of formaldehyd glycerin solution was found to be without beneficial effects. In one of the early cases a procedure used at Walter Reed General Hospital was adopted, that is, the introduction of a small drainage tube through a cannula, and instillation into the pleura of Dakin's solution. This patient did badly, and after five days rib resection was performed, after which he recovered slowly, requiring two secondary operations. We then limited the use of the aspirator to a diagnostic purpose, and after the fluid became purulent opened the chest by resection of one rib and introduced two large drainage tubes. No irrigations or instillations into the pleura were made for ten days after the operation, and in many of the cases were not made at all.

METHOD OF OPERATING

The area was infiltrated with a 0.25 per cent. solution of procain: first, the subderma and then the muscle over the selected rib, and finally, the periosteum covering the rib. In this manner a portion of the rib was removed and drainage tubes were introduced as easily as thoracotomy could be performed and without distress to the patient.

BACTERIOLOGIC FINDINGS

All the patients had bronchial pneumonia of Type IV following the influenza epidemic of October, 1918. All were very sick for a long time with a severe general infection, and in all of the fatal cases the patients had serious complications, or rather infections involving other than the pleural cavity. Many of the patients were considered to be in a hopeless condition at the time of operation, but made excellent recoveries.

COMMENT

It thus appears that the severity of the disease and the tendency to chronicity bore no relation to the variety of organism found in the pleural fluid. In no case was operation performed earlier than seventeen days after the onset of pneumonia, and the average period was twenty-five days. In no case were instillations into the pleural cavity permitted during the first ten days. Cases presenting profuse and offensive discharge were then treated with instillations. Dakin's solution was used in five cases; formaldehyd glycerin solution in five cases, and simple flushing with 50 per cent. solution of glucose in a considerable number. This procedure was highly

TABLE 2.—RESULTS OF TREATMENT

	No.
Number of cases developing in this camp from July 1, 1918, to April 1, 1919	71
Number treated immediately by open drainage	68
Deaths	18
Recoveries with full lung expansion without secondary operations and returned to duty prior to April 15, 1919	36
Convalescent without secondary operation	2
Number subjected to secondary operation	10
Convalescent after secondary operation	4
Ambulatory patients presenting cavities of various sizes in the pleura	7
Bed patients ill with complications	1
*Cases treated primarily by the Mozingo method, subsequently by open drainage	3

*These are now ambulatory cases but have large suppurating pleural cavities.

regarded for some time, and it gradually supplanted the use of formaldehyd solution and Dakin's solution.

Ward 3 was devoted entirely to patients with empyema, and the overflow was sent to Ward 6. All the experimental work with antiseptic solutions was done in Ward 3. In Ward 6 all patients presenting a high temperature were irrigated with physiologic sodium chlorid solution. Eighteen cases were treated in Ward 6, and it is an interesting fact that no death occurred in that ward.

Eventually the use of all irrigating solutions except that of physiologic sodium chlorid solution was abandoned in Ward 3. The ten patients treated with

TABLE 3.—ORGANISMS FOUND IN PLEURAL FLUID

	No.
In fatal cases:	
Pneumococcus Type IV.	8
Hemolytic streptococcus	6
Nonhemolytic streptococcus	1
Staphylococcus	1
In patients that recovered:	
Pneumococcus Type IV.	19
Hemolytic streptococcus	10
Nonhemolytic streptococcus	3
Staphylococcus	2
In patients still in hospital:	
Pneumococcus	5
Hemolytic streptococcus	6
Nonhemolytic streptococcus	1

Dakin's solution and the formaldehyd glyerin solution were found after several months to have partially collapsed lungs and cavities of considerable size. They were subjected to secondary operations, and in each case a very thick layer of organized lymph was found holding the lung in a state of partial collapse. Ribs were removed and numerous incisions were made across the confining layer of lymph, and four of the patients are now convalescing, and the others are ambulatory and in good physical condition.

In connection with the consideration of the use of Dakin's solution in empyema I quote the following from a private letter received from Major F. C. Warnshuis, chief of the surgical service of Base Hos-

pital No. 99, at Hyres-Var, France, who in the summer of 1918 was attached to this service:

I thought I would be through with empyema when I left Sherman, but it seems not. Yesterday we received 260 surgical cases, among which were eleven active empyemas. These patients had been operated on from four to ten weeks before, and were about like the bunch we cleaned up at Sherman. There were in addition five cases healed. In going over their histories today I find that the eleven cases had been treated with Dakin's, while the five healed cases had not, so you see it is the same old story; and what gets me is that they can't see the harm done by Dakin's when introduced into the pleural cavity. I hope you comment strongly on the misuse of Dakin's solution in the treatment of empyema. I consider it a crime to use it.

Dec. 21, 1918, we received a report of the method adopted at Walter Reed General Hospital by Capt. A. E. Mozingo which he calls the "closed method." This consists in introducing a small rubber tube into the pleural cavity through a cannula or by puncture through the chest wall with a pair of forceps, evacuating fluid by suction with bulb syringe introducing Dakin's solution, withdrawing it again by means of a bulb and repeating this procedure at intervals of two hours for several days, after which formaldehyd glycerin solution is instilled through the tube after the irrigation with surgical solution of chlorinated soda. In the interval the tube is closed by shut-off, and no air at any time is permitted to enter the pleura. After obtaining the details of this treatment we received three new cases. We adopted the treatment in each case on the ninth day after the onset of pneumonia. All the patients were very sick and had large accumulations of seropurulent fluid, which was reported by the laboratory to contain hemolytic streptococci. In the first case pneumonia developed, December 19. Thoracotomy by the closed method was performed, December 28. Irrigations with surgical solution of chlorinated soda every two hours were continued for seven days, after which irrigations were done twice a day with instillations of formaldehyd glycerin solution until February 2, when the fluid was reported to be sterile and the thoracic opening closed spontaneously a few days thereafter. The second patient entered the hospital, December 4, with measles. Secondary pneumonia developed, December 18. Thoracotomy by the closed method was performed, December 27. The same after-treatment followed as in other cases, and the thoracic wound closed spontaneously, January 29.

The third patient developed pneumonia, January 5. Thoracotomy by the closed method was performed, January 14, and the wound closed spontaneously, January 25.

At this period we felt highly elated over this method of treatment, and hoped that a real advance had been made in the handling of this disease. The roentgen-ray laboratory reports were not reassuring, as each examination revealed gradually increasing amounts of fluid in the pleura, and no evidence was found that the collapsed lungs were expanding to fill the space. One month after the closure of the openings in the thoracic wall, the fluoroscope disclosed fluid in each case up to the level of the third rib. The aspirator revealed the presence of pus, which in one case resulted in a culture of hemolytic streptococci. In two cases, culture was negative. Rib resection was performed in these three cases, and very large cavities were discovered. The same firm-appearing layer of organized lymph confining the lungs in compression, as had been found in all the other cases treated by instillation of irritating antiseptics, was found. Negative pressure had been continuously applied to these cases by creating a partial vacuum in the cavity, commencing nine days after the onset of pneumonia, thus probably cutting short the infecting process, yet we were confronted with larger cavities than we had previously been called on to cope with in cases treated by open drainage. Many writers have claimed that Dakin's solution dissolves inflammatory lymph and thus hastens lung expansion. I have never seen any evidence of the correctness of this opinion. On the contrary, our observation leads to the conclusion that it, as well as formaldehyd glycerin solution, produces irritation of the serous membrane and promotes the formation of thick and resisting lymph deposits, assisting in blocking off the system from the infecting organisms, but in so doing effectually binding down the collapsed lung. It is greatly to be regretted that this is so, because it is the most agreeable method of treatment to use in the early stages. These three patients now have open wounds with considerable drainage therefrom, and the collapsed lungs give no signs of expansion.

The method followed to assist in the expansion of the lungs has been the blow-pipe method of blowing water from one bottle to another and in ambulatory patients the use of various mild calisthenic exercises. The water blowing procedure we regard as valuable. It has been used faithfully in all cases, including the three treated by the closed method, and it has been generally successful except in the cases in which the effect of irritating antiseptics has been the cause of the formation of thick layers of organized lymph over the compressed lung.

NECROPSY FINDINGS IN FATAL CASES

CASE 1.—Empyema, right; rib resection, Oct. 29, 1918. The patient died, November 8. There was a small cavity of pus between the lung and the pericardial pleura. Small pus pockets were located in the mediastinal tissues. The pericardium contained 20 c.c. of turbid fluid. The left lung showed unresolved pneumonia. The right lung was practically solid.

CASE 2.—Empyema, left; rib resection, Oct. 30, 1918. The patient died, December 5. After removal of all the thoracic viscera, an abscess was found on the left above the fourth rib containing 200 c.c. of pus. The pleural cavity below that point was drained. The pericardium was so adherent that in an attempt to separate it an opening was made directly into the right ventricle. The left lung was collapsed and firmly adherent. The right pleura contained 750 c.c. of watery fluid. A pus pocket 2 inches deep was found between the upper and the lower lobe of the left lung. The middle and lower lobes of the right sank in water. A small pocket of pus was found between the middle and the lower lobe. The left kidney was nodular in appearance. Purulent fluid exuded from the ureter.

CASE 3.—Empyema, left; rib resection, Oct. 24, 1918. The patient died, November 7. The left pleura contained 400 c.c. of thick, milky, greenish yellow fluid. The right pleura was obliterated. Posterior and above the base was a pocket of purulent material. The pericardial sac contained 200 c.c. of clear, straw colored fluid. The left lung was small and sank in water. The lower lobe of the right lung posteriorly was covered with shaggy exudate. The posterior and lateral portions of the lower lobe were red and contained no air.

CASE 4.—Empyema, right; rib resection, Oct. 30, 1918. The patient died, November 9. Beneath the sternum, overlying the pericardium, lay a pus pocket. The right pleural cavity contained a pocket of pus around the apex, limited by adhe-

sions below at the level of the third rib. An adhesion extended back to the midaxillary line along the rib, and the pocket then extended downward and posteriorly to the base. There was a large abscess lying between the medial portion of the lower lobe and the pericardium. The left pleura contained 200 c.c. of bloody fluid. The pericardium contained 400 c.c. of clear fluid. The left lung was solid in the upper lobe.

CASE 5.—Empyema, right; rib resection, Dec. 17, 1918. The patient died, January 1. The right lung was collapsed. Between the lung and the pericardial walls was a pocket of pus. The pelvis of the left kidney was distended and contained pus.

CASE 6.—Empyema, right; rib resection, Oct. 30, 1918. The patient died, November 9. The right pleura was thickened and the cavity empty. Between the pericardium and the anterior portion of the lung lay a sealed off pocket of pus. The lower lobe of the left lung was dark, meaty red. There were scattered areas of gray hepatization. An interlobar abscess the size of a hen's egg lay between the middle and the lower lobe.

CASE 7.—Empyema, Oct. 26, 1918; measles, November 7; rib resection, November 9, in the ward. The patient died, Jan. 7, 1919. The peritoneal cavity contained a large amount of greenish yellow pus. The left pleura presented dense, fibrinous adhesions. A walled off abscess formed a pocket extending from the second rib axillary line to the scapular line, with an area passing upward and backward to the vertebral column. The pericardial sac contained 25 c.c. of purulent fluid. An area of consolidation was found in both lungs. There were large amounts of thick, greenish pus in pockets between the coils of the intestine.

CASE 8.—Empyema, right, Oct. 12, 1918; rib resection, October 21. The patient died, November 26. The right pleural cavity presented a pocket limited by a fibrinous coating attached to the lower border of the fourth rib. The pleural cavity below this point was obliterated. The right lung sank except at the extreme apex. The valves of the heart presented marked nodular thickening on their free borders. The aorta presented fatty degeneration about the base.

CASE 9.—Empyema, right, Oct. 29, 1918; rib resection, October 30. The peritoneal cavity contained 600 c.c. of purulent fluid. The left pleural cavity contained 400 c.c. of purulent fluid. A large pocket lay above the fourth rib. The pericardium was thickened and contained 600 c.c. of purulent fluid. The stomach and intestine were covered on all surfaces with a plastic exudate.

CASE 10.—The patient was admitted to the hospital, Oct. 30, 1918, for manic-depressive insanity. He had pneumonia November 4, and empyema, Dec. 9. Rib resection on the left side was performed December 12. He died December 19. The pleural sac was obliterated anteriorly. Posteriorly there was a pus pocket containing very little fluid. The pericardium was thickened and contained 200 c.c. of purulent fluid. The right kidney pelvis contained purulent urine.

CASE 11.—Empyema, right, Dec. 31, 1918; thoracotomy by the closed method, Dec. 4. Dakin's solution was used until Jan. 1, 1919. Rib resection was performed January 8. The patient died January 29. The left pleural cavity contained 900 c.c. of fluid. The pericardial sac contained 20 c.c. of fluid. The right lung was densely adherent and sank in water. There was some pus in the peritoneal cavity.

CASE 12.—Empyema, left, Oct. 25, 1918; measles, November 12; rib resection, October 28. The patient died, November 24. The left pleural cavity contained a small amount of pus. The right pleural was free of fluid. The lung was adherent to the pericardial pleura. The pericardial sac contained 480 c.c. of pus. Throughout all lobes of the lungs, shotlike nodules were palpated.

CASE 13.—Empyema, left, Nov. 1, 1918; purulent pericarditis, November 13. The patient died, December 6. The pericardial sac was large and contained 1,000 c.c. of pus. The left pleural cavity was obliterated. At the posterior and lower border of the right lung there was an abscess cavity measuring 13 by 7.5 by 4.5 cm.

CASE 14.—Empyema, left, Oct. 27, 1918; rib resection, October 28. The patient died, November 14. The right pleural sac contained 1,100 c.c. of serous fluid. The left pleura was thickened and contained no fluid. The lower lobe of the left lung sank in water. The right lung was covered on all surfaces by a fibrous exudate. Pockets of pus were found between the lobes.

CASE 15.—Empyema, left, Oct. 27, 1918; measles, November 17; rib resection, October 28. The patient died, November 18. The right pleura contained 600 c.c. of purulent fluid. The pericardial sac was obliterated. The lower lobe of the left lung sank in water. The middle and lower lobes of the right lung contained firm nodules.

CASE 16.—Empyema, right, Nov. 8, 1918; rib resection, November 23. The patient died, April 15, 1919. There was an empyemic cavity, 3 by 4 inches, well drained. Miliary tubercles were distributed throughout both lungs.

PATIENTS RECEIVED BY TRANSFER

In addition to the seventy-one cases originating in this camp since July 1, 1918, this service has received thirty patients by transfer from overseas and from other camps. Among these patients there were three who had been sick more than a year. One had pneumonia and empyema at Camp McArthur in the spring of 1917. He recovered and went overseas, and the sinus in the chest wall reopened eight months later. He had passed through many hospitals and had been operated on several times. When admitted here he had a large cavity with complete collapse of the lung. The ribs previously removed had reformed, presenting many fantastic forms. He was operated on here and did very well for a time, but died following a second operation which was not considered a severe one. Necropsy revealed advanced tuberculosis in the opposite lung. One of the other patients had taken sick on a transport in March, 1918, where he had remained until May, when he was landed in New York. He had passed through five operations, and still presents a discharging sinus from a small pleural cavity. The third one was a patient of Camp Dodge base hospital and General Hospital No. 26 for a year, and when admitted here had a discharging sinus from a large pleural cavity, which healed rapidly after resection of four ribs. Many of the overseas cases resulted from gunshot wounds.

Of the patients received by transfer, one died, fourteen recovered and were returned to duty, and fifteen are still in the hospital in good general condition, ambulatory and apparently convalescent.

It will be noted that none of our patients died of uncomplicated empyema, but rather from an intense general infection in which the pleural inflammation constituted but one factor in the case. It will also be noted that it is comparatively easy to render the pleural cavity sterile, but that such accomplishment does not mean the cure of the patient, and that no case should be pronounced cured until the expansion of the lung has produced contact with the thoracic wall and obliterated the infected space.

CONCLUSIONS

1. Empyema, as it has occurred in this camp, is but one element in an intense pneumococcic infection to which in many cases the streptococcus has been added without apparently influencing the progress of the disease.

2. The presence of fluid in the pleura is at first protective to the diseased lung, and it should not be

removed at an early period unless it is replaced, in part, by some other fluid.

3. If the patients survive the pneumonic process and the fluid becomes purulent, it should be drained through a large tube introduced after a rib resection under a local anesthetic, and under no circumstances should this procedure be adopted before the twelfth day of the disease, and so early as that only under exceptional circumstances.

4. Drainage having been established at the most dependent point in the cavity, irrigations with, or instillations of, irritating chemical solutions should be abstained from. If the drainage is adequate they will not be required. If not adequate, flushing with physiologic sodium chlorid solution will be all that will be required, and as soon as practicable, adequate drainage should be provided.

5. Attention is invited to the fact that this summary brings us to the adoption of the prewar theory of the surgical treatment of empyema, dismisses the theory so often advanced that a soldier requires different treatment than a civilian, and that the lung disease differs in any sense from the corresponding infection in civil life, except in the degree of severity caused by overcrowding, and relegates to the boneyard all of the many fancy treatments of empyema evolved by the faddists who have been privileged to observe a series of cases for a limited period of time. It has been my fortune to observe the final period of one epidemic of empyema and nearly the whole period of a second epidemic at this camp. I entered on the direction of the surgical treatment to be followed in the second epidemic with an open mind, without prejudice, and filled with a hope that formaldehyd glycerin solution instillation during the early stages of this disease would be beneficial. The use of Dakin's solution had been tested here in the first epidemic, and universally condemned by every surgeon who had handled it, and yet I insisted on its use in five cases by the open method and in three by the closed method with the results as stated above. I am now firmly of the opinion that the long established principles of surgery as evolved by many years of experience in civil life and enunciated in practically every textbook on surgery as the proper treatment of empyema has not been shaken from its foundation by any of the fads and fancies evolved during the war period.

Statistical Studies of the Influenza Epidemic Being Made by the U. S. Public Health Service.—Statistical studies are now being undertaken by the Public Health Service relative to the influenza epidemic. These studies comprise five main divisions: (1) special surveys to determine the incidence rate, type, duration and fatality of influenza in representative areas in different sections of the country in relation to color, age, sex, household congestion and time of occurrence; (2) detailed analyses of morbidity records available through state health departments to show chiefly the chronology, sex and age distribution of cases as reported; (3) preliminary analyses of records of epidemic mortality in a few states with reference to the mortality in various civil subdivisions by color, sex and age groups in successive periods of the epidemic; (4) a special inquiry into the nature and scope of preventive and relief measures adopted in larger cities to combat the epidemic. (5) In addition, certain compilations and analyses are being made from available published data, including current mortality statistics from certain foreign countries, and mortality from influenza and pneumonia in previous years in the United States. A special statistical office has been established under the direction of Surg. W. H. Frost and Statistician Edgar Sydenstricker, with Dr. Raymond Pearl of the Johns Hopkins University School of Hygiene and Public Health as consultant.

UNILATERAL ANESTHESIA OF THE CORNEA AND CONJUNCTIVA

A DIAGNOSTIC SIGN OF COMA DUE TO HEMIPLEGIA

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A physician may at any time be confronted with the necessity of determining the cause of coma; it is often difficult to say whether one is dealing with a postepileptic state, uremia, some toxic condition, or hysteria. We have found a sign which has been of great value in establishing the diagnosis of coma due to hemiplegia. It is known that in profound coma all reflexes are abolished; but in cases of moderate stupor or confused states this sign has helped to establish the diagnosis. The sign is a unilateral anesthesia of the cornea on the side of the hemiplegia, that is, the side opposite the lesion.

It has long been known and recently emphasized that the unilateral diminution, or absence of the abdominal wall reflexes, is an important sign of hemiplegia. We have found that in some instances, particularly in women with flabby abdominal musculature, it is difficult to elicit this sign. In such cases, and in all others for that matter, the unilateral absence of the corneal reflex is very helpful.

One must recall that the corneal reflex is a consensual reflex. The introduction of a foreign body into one eye produces a winking reflex in both eyes. This reflex is essentially protective, and apparently belongs to those mediated through the brain. It can be elicited by carefully passing a small blunt object along the conjunctiva to the corneal margin. One must guard against reaching the pupillary area because of the possibility of eliciting a visual reflex, which is present even in moderately stuporous cases. We have found this reflex absent in practically all hemiplegias with, and without, coma. We have not yet had occasion to study this sign in cases of crossed hemiplegia.

ABOLITION OF THE REFLEX

In looking through the literature we found only a single reference to this subject, one by Milian.[1] He attributed the loss of the reflex to the lesion of the facial nerve, that is, the motor arc, and he thought that in crossed lesions the abolition should occur on the same side as the facial paralysis. From our observations we must take issue with him, because if the absence of the reflex were due to interference with the motor arc, the consensual reflex should still be present on the other side. The sign should also disappear with the return of innervation of the facial nerve, which occurs in many cases. We have found, in our cases, no evidence of a consensual reflex, and, in some cases, we have been able to elicit the reflex on the paralyzed side by testing the cornea of the healthy side. This proved that the abolition of the reflex was not due to interference with the motor arc but due to the anesthesia of the cornea and conjunctiva.

The anesthesia of the cornea may be due to the presence of sensory fibers in the motor pathways, which are injured by the lesion causing hemiplegia, or, what seems more likely, is due to Monakow's diaschisis,

1. Milian: Progrès méd. **25**: 229 (May 1) 1909.

with radiation of the insult to the sensory tracts. In cases with pure lesion of the motor tracts this sign tends to disappear after a few days. In lesions close to the thalamus, there is a tendency for the hemianesthesia to persist.[1]

Among our observations there have been many cases in which this has been the only sign of hemiplegia. In one case of what looked like a spasm of the cerebral vessels with transient right sided hemiparesis and doubtful Babinski, there was an absence of the corneal reflex on that side, thus proving the delicacy of this test for hemiplegia.

This sign should be especially valuable to the ambulance surgeon. It would help him in the differentiation of comotose states, so that he would not be too ready with the diagnosis of alcoholism. It is also very important from the standpoint of therapy. Given the diagnosis of hemiplegia, the treatment will necessarily be purely expectant, quite the opposite of the active treatment necessary for uremia.

There is only one condition that we can think of which would present difficulty in diagnosis. That condition is fracture of the base of the skull, involving the posterior fossa with injury to the trigeminus. In such cases, however, evidence of injury to the other nerves of the posterior fossa, the roentgenographic findings, the possible presence of blood in the spinal fluid, and the subsequent clinical course would help in the differential diagnosis. It is our hope that the test will be tried, and its value established through more extensive observation than our own.

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INTRAVENOUS INJECTIONS OF FOREIGN PROTEIN IN INFLUENZAL PNEUMONIA

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This report deals with the results from the intravenous injection of a foreign protein in eleven cases of influenzal pneumonia. Nine of the patients were critically ill and presented a grave prognosis. The protein used consisted of typhoid bacilli, macerated and exposed to the soluble action of alcohol for twelve hours, washed free of alcohol and suspended in physiologic sodium chlorid solution, the concentration being the equivalent of approximately three million bacilli per cubic centimeter. The dose employed was sufficient to produce a definite, so-called protein reaction, as a rule 1 c.c. Leukocyte counts were made previous to the injections, and from four to twelve hours following the reaction. In several cases blood chemistry determinations were made before and after the injections.

From thirty to forty-five minutes after the injections the patients experienced a typical protein reaction, characterized by a severe chill and moderate cyanosis, lasting from fifteen to twenty minutes and followed by a period of profuse sweating and marked elevation of temperature. Shortly following the period of sweating the patients invariably felt and appeared much improved. In several cases, notably Cases 2, 6 and 11, following the marked elevation of temperature, there occurred a rapid crisis with no subsequent rise in temperature, the patient going on to complete recovery.

CASE 1.—Jan. 10, 1919, the patient developed influenza and Jan. 13 pneumonia involving both lower lobes was diagnosed. Bacteriologic examination of the sputum showed Type IV pneumococcus as the predominating organism. The patient received 1 c.c. of protein at 3 p. m., January 13. Blood pressure before the injection was: systolic, 124; diastolic, 68; one hour following the reaction: systolic, 132; diastolic, 68. The leukocyte count before the injection was 5,500, with 65 per cent. polymorphonuclear elements; six hours after the injection the count was 7,040. Blood chemistry of blood obtained four hours after the injection showed: urea nitrogen, 18.2 mg. per hundred cubic centimeters, urea, 38.2 mg. per hundred cubic centimeters. Carbon dioxid combining power of the blood plasma was 57 per cent. January 14, the leukocytes were 7,920. January 15, a second injection of 1 c.c. of protein was given. The leukocytes before the injection were 4,840, and seven hours after the reaction 6,380. This patient did not respond to the protein injections sufficiently to warrant its further use. Death occurred, January 19. In this case the slight increase in the number of leukocytes can probably be attributed to the protein injected, but the increase was not at all commensurate with the severity of the reaction that occurred following the injection. The slight increase is probably due to the marked inhibition of the leukocytic-forming organs because of the toxins resulting from the infection.

LEUKOCYTIC REACTION FOLLOWING THE INTRAVENOUS PROTEIN INJECTIONS IN ELEVEN CASES OF PNEUMONIA

		Leukocytes						
		Before Injection		After Injection				
Case	Day of Injection	Total Number	Polymorphonuclears, per Cent.	Total Number	Polymorphonuclears, per Cent.	Hours after Injection	End-Results	Type of Case
1	1/13/19	5,500	65	7,040	..	6	Death	Critical
	1/15/19	4,840	..	6,380	..	7		
2	1/13/19	3,740	..	10,560	..	6	Recovery	Serious
3	1/23/19	5,720	82	15,840	95	4	Empyema and death	Critical
	1/24/19	.....	..	13,640	86	4		
	1/25/19	.....	..	11,660	90	6		
	1/30/19	9,900	88	17,600	72	6		
4	1/16/19	6,160	..	7,920	..	4	Death	Critical
	1/17/19	2,420	..	7,700	..	4		
5	1/20/19	8,360	..	14,300	..	12	Recovery	Serious
6	1/28/19	4,840	65	5,500	..	12	Death from empyema	Critical
	1/30/19	5,720						
	2/ 1/19	9,900	70	17,820	68	6		
	2/ 2/19	14,740	79	16,720	81	6		
7	1/19/19	5,940	71	4,840	..	2½	Recovery	Serious
8	2/12/19	3,960	78	3,740	72	12	Recovery	Mild
9	1/26/19	.....	..	5,500	68	2	Recovery	Mild
10	3/31/19	3,960	68	7,260	70	9	Recovery	Serious
	4/ 1/19	.....	..	6,820	78	3		
	4/ 2/19	7,040	77	4,840	91	4		
11	1/22/19	6,380	83	16,720	..	10	Recovery	Serious

CASE 2.—Jan. 7, 1919, the patient developed influenza, and January 13, bronchopneumonia involving both lower lobes was diagnosed. January 13, 1.5 c.c. of protein were injected intravenously. Forty-five minutes later there occurred a severe chill lasting twenty minutes, followed by profuse sweating. The findings in the blood before injection were:

Creatinin, 2.10 mg.; urea nitrogen, 17.2 mg.; urea, 36.8 mg.; uric acid, 6.0 mg. per 100 c.c. Carbondioxid combining power of the blood plasma 48 per cent.; leukocytes, 3,740; blood pressure, 112-64.

The blood findings six hours after the injection were:

Creatinin, 2.00 mg.; urea nitrogen, 16.3 mg.; urea, 34.88 mg.; uric acid, 5.00 mg. per 100 c.c.; leukocytes 10,560; blood pressure, 134-80.

In this case the temperature dropped to normal ten hours after the injection and the patient went on to a complete recovery.

CASE 3.—Jan. 18, 1919, the patient developed influenza and January 22, pneumonia involving both lower lobes was diag-

1. It is, of course, understood that the anesthesia of the cornea and conjunctiva is only part of a cortical hemianesthesia, and the value of the sign depends on its absolute objectivity.

nosed. January 23, 0.75 c.c. of protein was given intravenously. Leukocytes before the injection were 5,720, with 78 per cent. polymorphonuclear elements; four hours after the injection the count was 15,840, with 95 per cent. polymorphonuclear elements.

Blood chemistry before this injection showed:

Creatinin, 1.01 mg.; urea nitrogen, 20.7 mg.; urea, 44.29; uric acid, 3.65 mg. per 100 c.c. Carbon dioxid combining power of the blood plasma was 51 per cent.

Second and third injections of the protein were given, January 24 and January 25, maintaining the leukocyte counts around 12,000 and the percentage of polymorphonuclear elements between 85 and 90. January 30, the leukocytes had dropped to 9,900. A fourth injection was given on this day, which increased the count to 17,600, with 72 per cent. of polymorphonuclear elements. January 31, a serofibrinous pleurisy was diagnosed. February 5, operation was performed for empyema; death ensued, February 8. After January 31, the leukocyte counts remained over 20,000 and no further injections of protein were indicated. Chart 1 shows the temperature reactions following the first three protein injections.

CASE 11.—Jan. 16, 1919, the patient developed influenza and January 21, bronchopneumonia involving the left lower lobe was diagnosed. January 22, 1 c.c. of protein was given intravenously, which was followed in forty-five minutes by a severe chill. The leukocytes before the injection were 6,380, ten hours after the injection the count was 16,720. Following the reaction the temperature dropped to normal and remained so until the patient was discharged from the hospital.

Eleven cases were available for this study. With two exceptions cases were selected that were critical and in which leukocyte counts were definitely of the leukopenic type, the aim being, if possible, to provoke

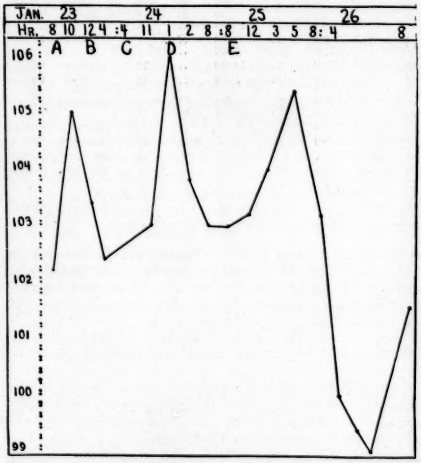

Chart 1 (Case 3).—Temperature reaction following three injections of protein: *A*, leukocyte count, 5,720; intravenous injection of 0.75 c.c. of foreign protein; *B*, leukocyte count, 15,840; *C*, injection of 1 c.c. of foreign protein; *D*, leukocyte count, 13,640; *E*, leukocyte count, 11,600; injection of 1 c.c. of foreign protein.

a leukocytosis. Because of the few cases, the results, on paper, are not as convincing as they might otherwise be. Of the eleven cases, eight showed, following the injections, an increase in the total number of leukocytes, only five however an increase worth noting. In those cases showing a marked increase there was noted an increase in the proportion of the polymorphonuclear leukocytes. The three cases in which only a slight increase in the number of leukocytes occurred resulted in recovery. The two mild cases included in this series ended with recovery. Of the nine cases remaining, four resulted fatally; two, however, from empyema, after the development of which protein injections were not made, as a high leukocyte count had developed as a result of the complication.

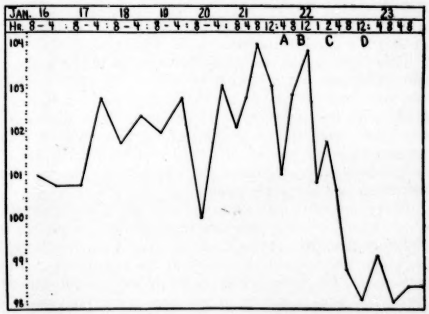

Chart 2 (Case 11).—Temperature reaction following protein injection: *A*, leukocyte count, 6,380; injection of 1 c.c. of foreign protein; *B*, marked chill, 11 a. m.; *C*, leukocyte count, 16,720; *D*, temperature normal.

So far as could be determined, the intravenous injection of typhoid protein has no deleterious effect, as regards an increased retention of the products of katabolism. This finding is in accord with the results obtained with the use of other protein extracts by McQuarrie and Whipple.[1] Mackenzie has mentioned the occurrence of diminished blood pressure following the injection intravenously of certain proteins. In this series two cases showed an increase in blood pressure, while the others investigated in respect to this point were normal.

Metschnikoff and his school have emphasized the importance of the polymorphonuclear leukocytes in natural and acquired immunity against bacterial infections. The medical profession has long attached considerable prognostic importance to a high leukocyte count, particularly in pneumonia. Recognizing the occurrence of a low leukocyte count in the blood of a vast majority of the influenzal pneumonias, it seemed logical, from the above point of view, to attempt to stimulate an increase of these cells in this condition. The occurrence of a leukocytosis following the injection of certain proteins has been demonstrated by many investigators. The results obtained by Miller and Lusk, and others, in their intravenous use in arthritis; and their use in pneumonia by the writer and the late Dr. Mathers (results not published), led us to apply them in the condition which is the subject of this paper. Those who have had experience with pneumonia following influenza appreciate the grave condition present in a certain percentage of these cases, in which the use of all previously known measures of treatment have been futile. This fact warranted the attempt made in this study.

Recently, Roberts and Cary[2] reported the use of intravenous injections of heat-killed pneumococcus,

1. McQuarrie and Whipple: Jour. Exper. M. **29**: 421, 1919.
2. Roberts and Cary: Bacterial Protein Injections in Influenzal Pneumonia, J. A. M. A. **72**: 922 (March 29) 1919.

streptococcus, staphylococcus and influenza bacilli in cases of influenza, in an attempt to abort pneumonia. These writers state that no untoward results followed such injections, and concluded that in their opinion protein injections have a definite therapeutic value in the disease under consideration. It is our opinion, based on the above-mentioned eleven cases and some experience with intravenous protein therapy in primary pneumonias, that the intravenous injection of foreign protein is efficacious in selected cases when made by one thoroughly conversant with all the possibilities of the therapy. Such injections, however, should not be employed as a routine by the general practitioner.

NEWER METHODS FOR RADIUM TREATMENT OF PROSTATIC AND VESICAL CANCER

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Since the early publications of Pasteau[1] and co-workers highly commending the use of radium for prostatic cancer, many eminent urologists—Barringer and Keyes, Marion, Young and others—have reported encouraging and hopeful results in the treatment with radium of both prostatic and vesical cancer.

The methods of use for cancer here, and of other parts of the body, have been practiced sufficiently long to establish certain principles. In the first place, it is important to control the dose of radiation by proper screening, accurate placement and limitation of exposure, so that radium burns may not be produced. In the second place, close approximation of the radium element to the area for radiation gives far better results than radiation at a distance, even when enormous doses are thus used.

METHODS OF TREATMENT

Various methods have been adopted by the different advocates of radium. The simplest is the ordinary rubber catheter as used by Pasteau, and now in common use, by which the radium may be placed in the rectum, the urethra or the bladder. The radium capsule in the catheter end may be directed fairly well by a stylet, or, with the bladder empty, the area to be treated may be presupposed to come into contact with the catheter end containing the radium, on its simple insertion. As suggested by Barringer,[2] tumors on the anterior wall or on either lateral bladder wall of the bladder may be more directly placed in contact with the radium by having the patient lie on his stomach or on the respective side involved, so that the radium capsule will come by gravity to lie over the tumor area. Barringer places the radium capsule in the bladder through the sheath of the cystoscope, which is then withdrawn, and the capsule is allowed to remain from six to ten hours. It is removed by means of a thread left hanging through the urethra.

For cancer of the prostate, Barringer plunges long needles through the perineum directly into the prostate, leaving them about twelve hours, the patient being under local anesthesia. Marion[3] uses a large hydrocele trocar in a similar manner, plunging it through the perineum, its point being guided by a finger in the rectum. The needle obturator is then removed and the radium capsule, with silver wire attached, is pushed through the sheath into the prostate, and the trocar is withdrawn. The capsule can be pulled out at the desired time by means of the wire. Burrows[4] has devised a special trocar with a slot for these particular perineal radium treatments. Young[5] has utilized the principles of his cystoscopic rongeur, and devised several instruments by means of which the radium tubes may, under direct cystoscopic vision, be accurately placed on bladder tumors, and then held in position by means of a mechanical arm attached to the cystoscopic table. For treatments per rectum he uses a special instrument shaped much like a sound, the end of which, containing the radium, is placed with the finger at the

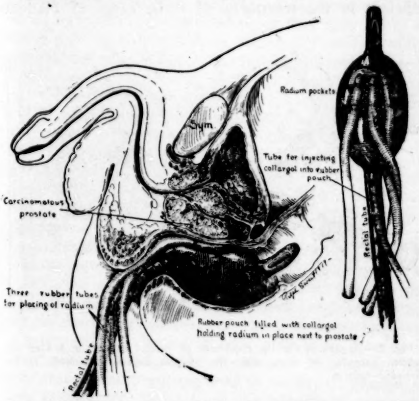
Radium pockets
Sym
Tube for injecting collargol into rubber pouch
Carcinomatous prostate
Rectal tube
Three rubber tubes for placing of radium
Rubber pouch filled with collargol holding radium in place next to prostate
Rectal tube

Fig. 1.—Apparatus for treating carcinomatous prostate by rectum.

point desired and, with the patient lying on one side, held in place by a mechanical arm attached to the table. Young's methods for the bladder, by their added accuracy, diminish the likelihood of radium burns and enable the safe use of more frequent applications.

USE OF INSTRUMENTS

In the treatment of eight cancerous prostates, I have had rectal burns in three patients. The radium has been inserted in a catheter and held in place by means of a heavy wire stylet, in a manner similar to that used by Young. Few patients can remain quietly in one position for the required period. In order to protect the walls of the rectum not required to be exposed to the rays, and to relieve the patient of the effort of remaining for hours in one position, the instrument shown in Figure 1 has been satisfactorily used during the last year in the treatment of four patients. The radium is first placed in the radium pockets. The

1. Pasteau, O.: Traitement du cancer de la prostate par le radium, Rev. des neal. de la nutrition, August, 1911, p. 363. Canhopé: Radium et cancer de la prostate, Thèse, Paris, 1911. Pasteau, Wickham and Degrais: 2e Conf. intern. pour. l'étude du cancer, Paris, 1910, p. 707. Pasteau and Degrais: De l'emploi du Radium dans le traitement des cancers de la Prostate, J. d'urol. méd. et chir. **4**: 341, 1913. Pasteau, Degrais and Bellat: Modifications cliniques et histologiques d'une tumeur de la prostate sous l'influence du radium, Assoc. franc. pour l'étude du cancer, July, 1913.

2. Barringer, B. S.: Radium in the Treatment of Cancer of the Prostate and Bladder, J. A. M. A. **67**: 1442 (Nov. 11) 1916; ibid., **68**: 1227 (April 28) 1917.

3. Marion, G.: D'un moyen simple et facile d'appliquer le radium dans le cancer de la prostate d'urol. méd. et chir. **7**: 335, 1917-1918.

4. Burrows, Arthur: Lancet **1**: 548 (April 7) 1917.

5. Young, H. H.: The Use of Radium in Cancer of the Prostate and Bladder, J. A. M. A. **68**: 1174 (April 21) 1917.

amount of radium and the pocket used depend on the point of radiation desired—whether prostate or left or right vesical area—and on the type of case and previous treatments. The pouch is then inserted while collapsed, and the radium pocket or pockets are accurately placed at the desired position by a finger in the rectum. Collargol, or some solution impermeable to the rays, is then injected into the pouch, the amount of distention desired being known by previous measurement, and the injection tube is clamped. The distended bag pushes the radium pocket snugly against prostate or vesical wall and holds it in place irrespective of the position of the patient. The rectal tube perforating the bag allows the passage of intestinal gas, so that the bag may be retained for hours without discomfort. The solution in the bag furnishes a filter which thoroughly protects all portions of the rectum except the small area directly in contact with the radium pocket.

For intravesical treatments the catheter method has likewise proved unsatisfactory in my experience. The method as illustrated in Figure 2 has proved simple and efficient in the treatment of three cases of bladder

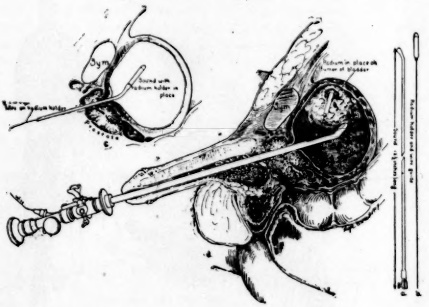

Fig. 2.—Apparatus for the treatment of vesical cancer; *a*, holder for radium capsule; *b*, wire, with the radium capsule attached, to be threaded into *a*.

cancer during the last year. The instruments consist of a brass capsule, with a screw cap, for holding the radium. At the other end is a square shoulder into which a wire 25 inches long is firmly fastened (*b*). The wire is threaded into a holder (*a*), curved near the end, at which is a square socket into which the square shoulder of the radium capsule firmly fits. At the other end is a screw which, by compressing the wire, holds the capsule firmly in the socket of the holder and forms a solid radium sound. This sound is first inserted into the bladder (*c*), and for radiation of the trigone or areas near the vesical neck can be accurately placed with the finger in the rectum as a guide, and held in position by a mechanical arm. For tumors on the apex or other portions of the bladder, however, more accurate placement is desired. The screw of *a* is loosened and the wire pushed through the sound so as to displace the radium holder from its socket. The sound can then be withdrawn through the urethra, leaving the holder in the bladder with the wire guide through the urethra. A No. 16 F Brown-Buerger single catheterizing cystoscope is then threaded on the wire into the bladder and, by means of its lever, the radium holder can be guided, as if it were an ureteral catheter, to any portion of the bladder desired (*d*), and held in this position by fixing the cystoscope to the table with a mechanical arm. The flexibility of the wire allows the holder to take a parallel position to any portion of bladder wall or tumor area.

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ANGIONEUROTIC EDEMA

REPORT OF CASE

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AND
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The case reported, while in the main one of angioneurotic edema, differs from the type commonly seen in that it embodies in its manifestations almost all the features of this disease. Its decided hereditary tendency, its appearance early in life, its persistent and frequent attacks, with pronounced local and general manifestations and a clinical course at times suggestive of an acute infection, stamp it as unusual. The possibility of confusing it with the expression of some sudden severe systemic derangement, the protean manifestation of some vascular disturbance such as acroparesthesia, or classifying it as the familial type of edema described by Edgeworth or even as Milroy's disease is not unlikely.

REPORT OF CASE

History.—L., a white man, aged 24, born in Missouri, where he resided until his induction into military service, entered the base hospital at Camp Dodge, July 24, 1918, with the provisional diagnosis of "edema, origin undetermined." The attacks, he stated, began July 22, 1918, two days before admission, with a feeling of fulness and tension of both palms and soles accompanied by slight tingling and numbness. The following morning he awakened to find both hands, forearms, feet, legs, and thighs one-half again their natural size. The genitalia also were very much swollen. On the afternoon of the same day both upper and lower eyelids, cheeks, and, to a lesser extent, his tongue, became involved so that sight was almost impossible and speech and mastication difficult. The parts previously described continued swollen. The condition gave rise to but little discomfort, although the inconvenience of being unable to put on his clothing and shoes and the inability to use his hands incapacited him for his routine duties.

Physical Examination.—On the third day, that of admission to the hospital, the swelling subsided to some extent. The patient was 5 feet and 10 inches in height, weighed 175 pounds, and though not robust was not of an unhealthy appearance. All organs such as the eyes, ears, heart, lungs, and abdominal viscera were free from any palpable abnormalities. The eyelids exhibited an appearance such as one might expect in an edema the result of an acute diffuse nephritis. The cheeks and skin of the neck were puffy, but did not pit on pressure, while the tongue was grossly thickened but otherwise normal. The skin of the chest and abdomen, while of a fine texture, appeared thickened. It was somewhat blanched, dry and tense, with slight pitting on pressure. The skin of the upper and lower extremities presented much the same general phenomena, but the feet and hands were shiny, having a tense, slick appearance. They felt cold and clammy, and were a dark, dull, purplish red, with here and there a bit of white mottling. Moderately firm pressure resulted in some pitting, lasting from one to three minutes, while the subsequent blanching disap-

peared immediately, leaving a decidedly erythematous area. There was no dermographia or itching.

This attack lasted in all six days, disappearing gradually. Subsequent to this he had five attacks of from one to three days' duration during the six weeks of observation in the hospital. All were less severe, and each differed in some respect from the one described. In some the onset and duration covered only a few hours, while in others merely the hands were involved. These sometimes were very white and warm, at other times red and cold with numbness, tingling, and formication.

On the day of his admission, his temperature was 101.6 F., pulse 78, respiration 20. The red blood count was 4,780,000, hemoglobin 100 per cent. (Sahli), and the white blood count 20,000 with no noteworthy changes in the differential count. The blood pressure was 115 systolic and 85 diastolic. The following day the temperature, pulse and respiration were normal, and the white blood count fell to 9,000. In the second and fourth attacks there was again some rise in temperature and a moderate increase in the number of leukocystes. The urine, stool and blood Wassermann test were repeatedly negative, as were roentgenographic examinations of the gastro-intestinal tract, the sella turcica and the bones of the extremities. Neurologic examination was negative.

Past History.—The patient had been free from previous diseases, including nervous and venereal diseases, nor could there be elicited any history of dietetic or gastro-intestinal disorders. He was told by his parents that even in early childhood he had had similar attacks, occurring as frequently as two or three times a year. His own recollection dates back to the age of 14 years, at which time an attack not unlike the present occurred; but at that time he had in addition a markedly swollen tongue which seemed to fill his mouth completely, severe dyspnea, so that he feared choking to death, and abdominal cramps, without, however, any diarrhea. This attack fluctuated in severity from day to day, lasting in all fifteen days and undergoing a gradual decrudescence. He had had but one other such attack, which occurred when he was 17. Minor attacks, however, as the one described above, have been frequent, occurring as often as once a week. The onset of these covered from two to twenty-four hours, and lasted, in all, from twenty-four hours to three days.

Family History.—The grandparents on both sides died in old age. The mother and father are living and well. One uncle, the father's brother, has three children; the second, a boy of 24, has had several attacks of the same disorder. In the immediate family there are seven children.

The oldest, a sister of 36, occasionally has manifestations in which only the feet and hands are involved. A brother, aged 31, has attacks similar to those of this patient, with frequent involvement of the chest, marked dyspnea, "choking spells," and abdominal cramps. Another brother, aged 29, is living and well. A sister, aged 26, having at present pulmonary tuberculosis, is affected with the same disease to only a moderate extent. Two other brothers, aged 18 and 10, have always been in good health.

Triumph of Medicine in the War.—How important is the part that medicine plays in national welfare has been strikingly shown in the recent war. Whatever may be the verdict of history on the diplomatic, political, naval, military and economic phases of the war, there will be no hesitation about the brilliant triumphs of curative and preventive medicine. These triumphs have been partly the outcome of the researches and investigations of contemporary workers, not only in the science and art of medicine but also in the allied sciences of chemistry and physics and biology; but the victory was eventually ensured by the thousands of trained workers who knew how to make full use of all the resources which these sciences had placed at their disposal. Medical men of different nationalities, sometimes of different races, reared under different educational and social systems, were able to cooperate in the common endeavor, because they had all alike inherited the same traditions of rational medicine.—**Tweedy**, *Brit. M. J.* **2**:597 (May 17), 1919.

THE OPHTHALMOLOGIST AND THE PHYSICIAN *

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Each decade presents to the medical man a new problem; that is, the advancing edge of his science is ever shifting. Progress at one point permits of progress at other, formerly quieter zones. Twenty years ago a large group of medical patients were not well treated. "Neurasthenics" they were called, or, if they seemed likely to resent that name, they were assured that they were "only nervous," that they "had no organic trouble." The average general practitioner did not know how to help them, and so by his unsympathetic attitude he drove them into the churches and offices of various sects antagonistic to medicine.

The improved methods of diagnosis and the great recent advances in our knowledge of the functional neuroses have, however, proved to us that very many of these patients can be helped, some very easily. Many complain of easy fatigability alone, which may be due to various common diseases in their earlier stages before any characteristic symptoms have appeared, usually diseases of the central nervous system or of the cardio-vascular-renal organs. Several other groups may be separated; but only one interests us now, a large group of patients with no real disease but who are handicapped by some mental or physical defect, often permanent in character, which leads to symptoms which the patient accepts as a part of his life and which may in time, because of the fatigue and suffering produced, lead to nervous or even to mental breakdown. The conditions which this group of patients presents are very complex. Several factors work conjointly in the production of symptoms, but one is so important that I invite you to discuss it now with me. I refer to eyestrain in persons whose nervous makeup is such that this strain alone can lead to results of greater or less importance, or at least can modify a syndrome produced by some other injuring factor. I would avoid emphasizing eyestrain as the sole cause of any symptom. In these cases it usually is not. The real cause is more likely to be in the neuropathic disposition of the patient himself. These patients all deserve careful and sympathetic study, since many are greatly relieved by the proper correction of errors of refraction. The point, however, which now I would make is that these patients cannot be helped by the ophthalmologist alone any more than by the internist alone. He requires their combined efforts. I invite you today to such consultation with the subject of eyestrain as our patient. I would not for one moment claim that the subject is new. Nearly every symptom and disease from heterodoxy in religion to ingrowing toenail has been ascribed to eyestrain. It would not be wise before this audience to increase this list without good reason, but an intensive study of certain indirect results may be timely, for only by such studies can we improve our methods of diagnosis and increase our efficiency in treatment.

* Read before the Section on Ophthalmology at the Seventieth Annual Session of the American Medical Association, Atlantic City, N. J., June, 1919.

HEADACHES RESULTING FROM EYESTRAIN

That symptom of eyestrain of which one hears the most is headache. By no means are all headaches caused by, or associated with, eyestrain. The headaches of nasal origin, of intracranial diseases, etc., do not interest us now. Neither do all those who suffer from eyestrain headaches deserve to be called neurasthenics. The direct or simple headaches, which consist of pain in or near the eye, pain which directly follows close eye work and which promptly improves if the eyes are rested, are granted by most to be due to eyestrain. The more complex headaches, however, which would seem to depend more directly on gastro-intestinal disturbances, demand careful study. These so-called sick headaches, bilious headaches, etc., are not mere symptoms, but well systematized syndromes. They are just as truly acute illnesses as is pneumonia, or, better still, as are the chills of intermittent malarial fever. Like the latter, the periodic sick headaches are separated by periods of good health; they have their periodicity, their immediate causes, their characteristic (for each individual) prodromals, their mode of onset, a definite fastigium and a characteristic convalescence. These headaches are due, not to any one cause, but to a chain of causes. They resemble the result of a too close proximity of gunpowder and a lighted match. Neither the match nor the gunpowder is to blame for the explosion, but both together are. To speak more accurately, the patient himself, not the eyestrain, is chiefly to blame for these paroxysmal headaches.

Let us appeal to pathology for evidence on this point. Accurately we do not know the symptoms of disease. What we call the symptoms of disease are, on the contrary, evidences of defense. Evidences of the attack we may demonstrate in the laboratory; but fever, cough, vomiting, high blood pressure, pain, etc., are defense phenomena. For these the patient is responsible. Fever is without doubt a defense measure, sputum is an exudate to neutralize or to wash out a toxin, and cough is a measure to remove this; pain is a warning, etc. The sicker a man is, the fewer symptoms we see. Indeed, death itself in certain conditions would seem to be brought about by man's own defense mechanism, now acting destructively. (For example, Baldwin mentioned this possibility in pulmonary tuberculosis. That is, death is essentially suicide. According to this view, the consumptive resembles the Roman soldier who fought valiantly until he saw that the battle was against him: then he plunged his own sword into his own breast.)

So the paroxysmal headaches, like the periodic chills in malaria, may be interpreted as defensive crises of a type peculiar to, and depending on, the nervous organization of the patient; and the aim of our therapy should be, not to combat these headaches, but to render them unnecessary. That they can actually be beneficial is hard to believe, nor need we believe it and still claim them as defense phenomena, for other phenomena more clearly than headache the result of activity of a defense mechanism would seem of very doubtful advantage. And yet patients often do feel better after these sick headaches (although they usually take a brisk purge during the attack, and this is of itself often beneficial). But whatever the value of sick headaches, on one point I do insist, that even though they may be the result of eyestrain they are not due to eyestrain alone but represent individual reactions on the part of patients of certain types who fight that way. Others may have similar eye conditions and never a headache. They don't fight that way.

Many, even most, of these so-called sick or bilious headaches are associated with eyestrain, and yet the immediate cause of each paroxysm is so definitely other than the eye that this is often doubted. The eyestrain of these patients is a daily, almost hourly or continuous event, yet for weeks at a time the head is quite free from pain; then comes a definite paroxysm. It is hard for a man with headache immediately associated with constipation or other gastro-intestinal disturbance to believe in the importance of eyestrain in his case; it is hard for the person with Sunday headache to believe that eyestrain plus the relaxation and change of occupation of the Sabbath can cause that discomfort; we have great difficulty in persuading women whose headaches come only during their menstruation period and at no other times that they have eyestrain headache. And yet we can convince many of this relationship by relieving them in part at least of their headaches by proper glasses, even though they are constipated, or menstruating, or it is Sunday.

Just how we could explain the infrequency of headaches due to a cause that is continuous would be difficult were the headaches a direct result of eyestrain. For years, physicians had a similar difficulty in explaining the days of malaria fever free from chills. Certain illustrations may be of value to patients. We may speak of the patient as sensitized at certain times. We may liken the eyestrain to gunpowder which remains latent until it is touched off under certain conditions. Those who live on the seashore may appreciate the illustration of the shore at low tide. While the tide is high, one sails over certain of the rocks with safety; but at low tide these wreck the boat. Surely the rocks are no larger at low than at high tide, but they certainly are more dangerous. So eyestrain need be no more marked during menstruation or a constipated period; yet it is then that the patient suffers.

Since the individual is so important a factor in the causation of a headache, we would expect many individual differences in the character of headache due to eyestrain. And these we find. Yet there are certain features common in eyestrain headaches which, to say the least, are not common in those due to other causes: First, in the eyestrain headache the pain is superficial, while in the nasal headaches and headaches due to intracerebral causes the pains are deep seated. Second, the patient is definitely hyperesthetic. The skin is hypersensitive. He insists that the room be dark and quiet. He wants to be let alone. The photophobia may be extreme, the hyperacusis painful. Third, during a nasal headache there is usually demonstrable a slight functional mental reduction, but not in these. Fourth, reflex phenomena are common; vasodilatation of the temporal artery on one side; nausea and vomiting; blepharospasm, etc. Fifth, cerebral symptoms may occur: light sensations of central origin; paralysis of the external rectus muscle, trophic changes, as proved by the whitening of one eyebrow. Last, mental symptoms are common. Of these I shall speak later.

Sick headaches practically never occur in childhood or after presbyopia is well developed. They belong to the period of adolescence and young adult life. Beginning with the period of close eye work, they end when the functional activity of the ciliary muscle ends.

It is very important, however, to recognize that in addition to headaches these patients show many other

phenomena which are the equivalent of headaches, that is, which occur under similar conditions and which have the same significance as headaches. We may call them headache equivalents, or painless headaches. These may occur at any period of life, but it is during childhood and youth that we see them at their best. A child of about 6 years just beginning school may have attacks of bad temper or of depression which perplex the parents. Some children have crying spells after school which the mother cannot interpret. At these times some children will lock themselves in their rooms or crawl under the bed. These painless headaches are well illustrated by some children during automobile rides. They are called "poor travelers." They enjoy the ride at first but soon get unruly, very disagreeable, cross; they want to go home; they "hate the ride," they "hate everybody in the car." Such attacks of temper and depression in children may be nothing but headache equivalents in the child. When those giving this history reach from 14 to 18 years of age, typical paroxysmal headaches often begin.

The typical sick headache disappears with presbyopia. After that the patient may have no headaches of any form whatever (and be very grateful to whatever therapy he has last tried); or, a patient who formerly had no headache may then begin to have them; while in the third and more common group the paroxysmal sick headache is replaced by one of its equivalents, usually a more constant, less severe, duller pain, which the patient describes as "neuralgic," with fewer reflex disturbances, and no nausea nor vomiting. In still other cases the equivalent is not a pain but a definite psychic depression. Since the period of developing presbyopia is in women also that of the menopause, this depression is usually ascribed to the latter. It occurs, however, also in men of the sixth decade. Please do not for one moment think that I shall try to interpret all depression of the fifth and sixth decades as due to eyestrain. By far the most is not. But each depressed patient of this age who gives us no history of past attacks of mild depression and no evidence of developing organic brain disease (for example, paresis) should be referred to an ophthalmologist. One striking illustration was given by a woman who had never suffered from headache, and whose past history was free of any illness suggesting a psychosis. She began to have trouble reading and was fitted for glasses intended to correct her presbyopia. A few days later this woman was definitely depressed. She had no pain, but she wept constantly. Life had little of interest to her. The condition looked serious. She was, fortunately, sent back to the ophthalmologist. He found that the optician had placed the right lens over the left eye and vice versa. This corrected, the depression promptly disappeared.

In a few cases proper glasses will relieve a depression while in still more cases it will at least lessen it. I do not assent that eyestrain causes depression. There is evidently a strong tendency to psychic depression at that period of life, and eyestrain as well as many other injuring conditions may bring it out or make it worse.

In concluding this section I would repeat that most important point, that a change in the character of the headaches or the appearance of headaches and of psychic equivalents is good evidence of life-long eyestrain.

OTHER RESULTS OF EYESTRAIN

But headaches are by no means the most important or common results of eyestrain. The eyes are organs of pain sense as well as of vision, and eyestrain patients of the hypersensitive type dislike the glare of the sun on the snow or on the water; they dislike brightly lighted rooms; they are hypersensitive to certain colors or to certain combinations of colors. Second, the eyes have a sensitive and delicate motor apparatus. Certain sensations, such as the waving of the sidewalk like the billows of the ocean and the seeming movement of the walls of a room, seem due to a periodic relaxation and spasm of the muscles of accommodation. I believe I saved from the operating surgeon at least two cases in which a diagnosis of brain tumor had been made. In one operation on the skull had been definitely planned. Train sickness, dislike of moving pictures, to a certain degree seasickness (though this evidently is a very complex phenomenon), the feeling of floating in the air, spells of faintness, and especially dizziness or definite vertigo are for many patients evidences of eyestrain and probably associated with disturbances of the motor apparatus.

Lastly, the eye is actually a part of the central nervous system. Many nervous and mental symptoms with which eyestrain patients suffer may be due in part at least to their eyestrain. Some I have mentioned. To them may be added: discomfort caused by certain color combinations and by certain patterns, as, for illustration, certain wall papers if the design is in pronounced stripes; the confusion which some people feel in a crowd; a sense of unreality, as though the person were drifting off into space; (when we watch a receding object there is relaxation of the muscles of accommodation; when, therefore, these muscles relax spontaneously, we may have the sense of receding objects, that is, of motion); faint attacks; an unusual drowsiness on close eye work, probably nature's method of protecting the eyes; while the reverse also is true: Many a case of insomnia has been relieved by proper glasses. Not all these may be a result of eyestrain alone, but eyestrain patients certainly do have them, and often gain relief if their glasses are corrected.

But eyestrain has some more important effects than these. It may help explain certain phobias. The first of these is the result of uncertainty of balance. One gets considerable assistance in the diagnosis of a doubtful case by inquiring concerning the sports of childhood. "Could you," I ask the patient, "when a child run on a stone wall?" "Would you run on a plank over a brook?" "Would you run over a railroad bridge on the ties?" "Would you play tag on the rafters of a house partially built?" If the reply is "No," I ask: "Do you remember definite instances when your friends would do these things and that you positively would not, or when you hesitated so much that your friends commented on your timidity?" This symptom may persist throughout adult life. The dislike of looking down from a high point or walking on the edge of a height is common to many. One man, a good sportsman, told me that he could not bear to walk on a log over a brook, and would always find an excuse for his friends to go on ahead so that he might crawl over unnoticed on his hands and knees.

The explanation of this fear may be as follows: When we walk on a broad, smooth sidewalk, it makes little difference just where the feet are placed. A few inches difference in the length or width of our step is unimportant. But when crossing a brook on a plank, the feet must be accurately placed. Even a fraction of an inch makes a difference. It would seem as

though the mind of that wide zone of unconscious cerebration said to consciousness, "The eyes do not give me data accurate enough to guide the muscles of the feet;" and the language in which this mind speaks to us is that of fear. It is not height itself which worries these persons, for many a child who will refuse to walk on top of a wall will take great pleasure in climbing to the top of a tree. In the latter case the muscle, or better the joint, sense, is brought into play, while in the former the muscles are guided chiefly by vision. A related phenomenon is agoraphobia, or the fear of crossing an open square or street, especially if that street is a busy one; and this fear would seem to be a very wise and salutary protection.

Another mental feature in which eyestrain may make itself felt is the realm of dreams. Indeed, the eyestrain may show itself only in dreams. I have in mind one patient who for years never had a headache but who, when her glasses needed correcting, would have very disagreeable dreams: not of pains but of persons holding their heads with their hands and groaning as though in great pain. More common dreams are those of motion: flying, or falling off a precipice and waking with a start that shakes the bed. When one eyestrain patient lay down she often had the sense so vividly of flying up into space that she frequently clutched the bed to hold herself down. In the case of these dreams of falling, the start with awakening is superficially so similar to the night cries of a child with tuberculosis of the hip that one is tempted to assume an analogous spasm of a relaxing ciliary muscle as their cause.

At this point I should like to speak of the so-called inherited or family headaches. None of us can believe that a pain or a strain can be inherited, but the anatomic conditions that lead to eyestrain certainly are inherited. I have compiled a series of family charts which show that the physical resemblance of the features of the face and the tendency to headaches or their equivalents may run together through two and three generations. In this connection I should like to warn the reader that by resemblance I do not mean general stature, or coloring, or habits of speech, or expressions. I refer to the actual shape of the face. We know that noses and eyebrows and checks of a certain shape can be traced through several generations in certain families. We may assume, although we recognize the weakness of the supposition, that it is likely that eyeballs of similar shapes may be assumed if relatives have similarly shaped bony structures around the eye. At least, if of several brothers and sisters two or more have headaches while the others do not, and if one of their parents prior to 45 years of life had headaches, it is not unusual to find that these two or more children will resemble each other and this parent more than they will the others.

Possibly no specialty has become quite so special as ophthalmology. I mean that no other specialist is likely to work so independently of the general practitioner as does the ophthalmologist. Many of his patients go to him direct. I feel, however, that no specialist should keep quite so close to the internist as should he. The ophthalmologist often treats the eyes as though they were two optical instruments placed in front of the head and that his duty is merely to see that they focus correctly. They are optical instruments, but they also are very much more than that. They are, indeed, very closely connected with the central nervous system. In fact, for the most of us mentality even is in terms of vision.

Vision is not merely a physical problem; it is more a neuromuscular problem and we pay dearly for it. The muscles of the eye are small, but the fatigue that they can produce is certainly great.

THE COST OF VISION

Vision costs us a great deal; it is very expensive in terms of nervous force, and the question is, Can we afford it? If we cannot, can we by proper lenses reduce the expense to a point within our means? This one point I should like to make with all the emphasis at my command. In examining a patient for glasses, one of course tests his ability to see. But that should be only a means to an end. The problem is, indeed, to help the patient to see better; but the greater problem is to help him to see more cheaply, that is, with less strain; and of the group we are now discussing, many already see better than 20/20.

A common illustration used with patients is this: a young man wants an automobile and buys a Pierce-Arrow. We inspect the automobile; it is a splendid machine and runs finely. There is no doubt as to its quality. But can this particular young man afford to keep so expensive a machine? The quality of his machine and his ability to maintain it are two different questions. The analogy is of course not perfect, but I insist that while for the average man or woman standard vision is the goal of the ophthalmologist, for many patients (I refer to those who interest us just now) that is but a starting point.

What does their vision cost them? That is the question. Some already have vision better than the average and are wretched; many a patient has been "driven to distraction," as they say, by glasses which improve the keenness of their vision. I am sure that this has been literally true in some cases. Our eyestrain patients see well. As a matter of fact, they often have abnormally clear vision. Unfortunately for them, they see well with each eye. Their trouble is usually a slight defect which does not disturb vision but which does make vision expensive in terms of strain. If they had a greater defect in both eyes, there would be less strain; if one eye had a much greater defect than the other, there would be much less strain. But two keen eyes belonging to a neurotic patient, each with 20/15 vision with, for example, slight hypermetropia and slight asymmetrical oblique astigmatism or slight muscle imbalance, can keep their owner in pain and even in bed in a sanatorium. We internists, therefore, beg of you to fit your glasses to the patient's nervous system as well as to his eyes. May we beg of you in examining our patients not to value standard vision as anything more than a convenient scale? Please don't try hard to make our patient's vision standard any more than you would expect them to wear gloves or shoes of a standard size. Please don't fit our patients to your test cards, but rather use your test cards as a means of finding out what the normal vision of our patient is, and then attempt to get that for him as cheaply in terms of strain as possible.

To judge of the normal vision of an individual requires very careful refraction. I shall speak of that later. It also requires very careful ophthalmologic examination. Seldom in their reports to us of patients we refer to them do ophthalmologists note how sensitive or anesthetic is the macular region when a ray

of light is thrown on it. We always test that for ourselves, and it sometimes helps us in determining by further examination some past forgotten illness. It should help us when we come to determine the correction. It is very seldom that they report on the stippling of the macular region which dates back in a nephritis of pregnancy of years ago. It is seldom that they note the slight traces of an old neuroretinitis. You complain that the optometrist has invaded your field. The competent ones frankly treat the eyes as optical instruments and claim to do nothing more. Many of you, for the average case, do nothing more. Of course you do protect the patient in the case of some eye diseases which the optometrist would not be expected to discover; but that is the very least that you can do.

METHODS OF REFRACTION

And now please allow me to speak of your methods of refraction. I know that this is not the field of the internist; but it is his patient whom you are examining, and he is intensely interested that you succeed. His difficult cases form so small a percentage of your practice and take so much of your time that you would often prefer not to bother with them. But they are the most of our practice, and we need your help. We ask you, therefore, to consider refraction as the highest expression of your art, not as a necessary evil to be endured or handed over to a junior associate. Give it your best thought. Please be patient; your responsibility is great. We know often from watching you whether or not you will succeed with our patient, so pardon us if we ask you to consider these suggestions.

To begin with, it is fundamental that you first of all determine accurately the static error and all of it. Don't worry: we shall not ask you to correct all of it; but we do ask that you determine all of it before you plan to correct any of it. To do this requires complete paralysis of the muscles of accommodation. Homatropin may be satisfactory for the patients who come to you directly. I don't know anything about them; but if correction is intended to correct more than blurred vision, please use atropin, if possible. We think your use of cycloplegics is often a good deal of a farce. We ask you to determine the entire error, no matter how slight it is, no matter whether it disturbs vision or not, no matter whether you think it important or not. Those ophthalmologists who have helped us most always begin with a careful retinoscopic examination in order to get the general lay of the land and to guard against a gross error which the patient has learned to suppress. They insist that the distance from the patient when the retinoscopy is performed should be accurately measured and not estimated each time. Then, as the court of last appeal, they use the subjective tests to confirm this result and add details. Then comes the question of muscle balance, muscle strength, ciliary hypertrophy, etc.

At this point I would urge you not to fatigue the patient too much. In colorimetric work we do not allow the student to use one eye more than fifteen seconds at a time, and require that he determine this period accurately with a watch. While the fatigue during the refraction test may not be as rapid, yet we know that fatigue is important and does explain some poor results. The harder some of our friends try, the worse results they get; for the more pains they take, the more conscientiously they work, the more fatigued the patient's eyes get. The static error accurately determined, the tests repeated and checked up, then the question arises, How shall we meet it? and in answering that please allow us some voice. The formula of the error does not mathematically determine the formula for the glasses. Three men agreeing on the error might differ markedly in the glasses they would prescribe, and their differences would probably depend on their estimation of the patient, and we know our nervous patient much better than can you. In the case of your average patient you may follow certain general rules with average good results. But these cases I am now discussing are not average cases, and we internists who have examined them as individuals, not as seeing mechanisms, know well that you can make or break our chances of helping them. Some of these patients are hyperesthetic, some rather anesthetic; some are hypertonic, some more atonic. I remember one ophthalmologist who watched the patients as they walked to his chair, noted their stride, their posture, their snap; who pinched their arms to determine their muscular tonicity, and who talked to them to form some estimate of their mental tone. Do you? We have struggled with these same persons before we referred them to you. Cannot ophthalmologist and internist talk over the patient and together decide concerning the correction to be prescribed? You will need to teach us a great deal before we can help you much, but we are confident that if you will teach us how we can help them our patients will profit much as a result. Tonsils are no longer a local problem. The specialist in diseases of the throat has learned to discuss them in terms of heart, joints and kidneys. The nose is no longer entirely a local problem, for the rhinologist now consults with internists concerning the patient's asthma and dysmenorrhea. The internists now are struggling to relieve patients with neurasthenic reactions, and we ask you to come over into the field of neurologic ophthalmology and help us.

NECESSARY BUT OFTEN NEGLECTED REFINEMENTS IN EXAMINATION OF OCULAR REFRACTION*

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The examination and correction of errors of ocular refraction may be called an art. Preparatory scientific study is, of course, necessary; but without the proper mental attitude—an absolute belief in the importance of correcting small refractive errors, the best work is not possible. Long practice, infinite care, and attention to finer details are imperative requisites. It is an established fact that many of the worst sufferers of ametropic eyestrain are the subjects of small optical errors. Astigmatism is the important defect, and on its proper diagnosis and treatment rests most of the ophthalmologist's success.

A slight fault in the correction of refractive errors aggravates rather than relieves the accompanying asthenopic symptoms. By applying sufficient optical aid to allow the ciliary muscle to compensate perfectly for the uncorrected refractive defect, continuous rather than intermittent ametropic eyestrain is established.

* Read before the Section on Ophthalmology at the Seventieth Annual Session of the American Medical Association, Atlantic City, N. J., June, 1919.

In such cases the sufferers, apparently visually competent and resting assured that their lenses are correct, vainly seek elsewhere for relief from symptoms obviously of asthenopic origin. It is the experience of every careful American medical refractionist employing modern methods and refinements in technic that the exact optical correction, even though the change in lens be small (and by some unfortunately considered negligible), is often followed by brilliant results in apparently hopeless cases. It is common to relieve such persons, after they have exhausted their patience and finances in a weary and hopeless round of medical and surgical specialists, tenotomists, refracting opticians, physical culturists, Christian scientists, osteopaths, and endless other faddists and "pathists."

The observations herewith recorded have been suggested during an extensive ophthalmic practice extending over twenty-five years and devoted chiefly to the correction of ametropia in my private office. Thousands of examinations of refraction in a great variety of patients, of all ages and conditions, have been carefully recorded and preserved. The suggestions are not offered as especially original or unique, but they are all of striking value in routine office practice.

THE EXAMINATION ROOM

I have always worked in a room facing the north, allowing uniform light, without the periodic interruptions of direct sunlight. The patient is placed in the refracting chair with his back to a rear window, and looks toward the darkest corner of the room. There are no side windows to dazzle or disturb. All lighting is from behind or overhead. The examiner sits on a stool facing the window, and in front of his table of test lenses. The patient is placed on a revolving seat in a chair with short arms. It is desirable to have the eyes of the examiner and those of the patient on about the same level. With children and small adults there is used an adjustable foot rest attached to the chair. This may be elevated or lowered, to allow such patients to rest their feet comfortably.

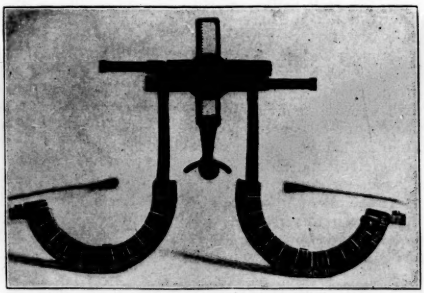

Fig. 1.—New model of trial frame, front view.

A rigid position of the head is insisted on, and with chronic head tilters, the head is fixed mechanically as in the old-fashioned photograph galleries. The patient is also urged to maintain the upright position, and not slouch down in the chair or cross the legs. Attached to the back of the patient's chair is a large, movable, black, metallic screen to surround the back of the head and to prevent reflections from the surfaces of the lenses applied. In some instances, draping a handkerchief over the head of the patient will be found most satisfactory. When so shielded from the rear glares, it is surprising how quickly the patient notices the relief from the lens-surface reflections.

TEST LENSES AND LENS TESTING DEVICES

It is rare to find a perfect set of test lenses, even in private offices. In hospitals and clinics, the test lenses are especially faulty, and generally dirty or permanently soiled. The stock test lenses are made to be sold at a moderate price, and it is commercially impossible for the optical manufacturers to guarantee perfection. In examining the cylinders, there will usually be found from 10 to 50 per cent. of errors as to exact centering and marking of the axes. Even with the help of reliable private prescription opticians, it took months before I could be satisfied that I possessed an absolutely perfect set of test lenses.

Every oculist should possess or have access to a mechanical lens measure, axis finder and centering machine. The oculist should also insist that the opticians who receive his prescriptions use such apparatus. Especially praiseworthy are the Geneva and Standard instruments and the Lloyd axometer. I use for centering and axis finding the instrument called by the trade name of "the Revelation," which is compact and cheap, and has proved very satisfactory for office work.

Of course, it is not reasonable to demand that the oculist so completely test all the lenses submitted to him for approval; but he should, first, thoroughly examine and verify his own test lenses, and then test a sufficient number of opticians' lenses to satisfy himself that they are careful, and also to impress on them that their work will be checked closely. If the oculist practices sufficient care and accuracy in his examinations to prescribe the proper lenses, there is no excuse for the optician, always receiving a reasonable profit for his work, to fail to employ similar care in grinding and fitting the lenses.

I am not prepared to give exact personal statistics as to opticians' errors, but they are unnecessarily numerous and they must be startling in the rural sections where the lenses are ordered by mail from wholesalers. Drs. Isaac Hartshorne and W. M. Richards of New York report figures collected from personal examinations that show a high percentage of errors in the work of reputable city prescription specialists; and they practically challenge much of the lens work of manufacturers. It seems that in the quest for pure food and pure drug laws, some official attention might be directed to the dispensing of correct optical lenses—a semimedical and hygienic function.

The proper grinding and accurate centering of spherical lenses is not difficult, but properly to prepare cylindric lenses is different. The exact axis should be marked by short lines extending from the very periphery of the lens. The test-lens cells should be 1½ inches in diameter, and both the spheres and cylinders should have handles at least three-fourths inch long, with the quality and strength of their curves plainly stamped in white. The convex lenses are in silver-plated cells, and the concave in gold-plated cells.

Spheres and cylinders of 0.25 D. curve, mounted in cells with special handles about 2½ inches long, are much more satisfactory than the regular case lenses in making the front tests. Refraction examinations should be ended by using cross-cylinders of 0.25 D. curve, similarly mounted with longer handles.

Before definitely recording the refraction findings, the exact axis of the astigmatism of each eye should be confirmed by placing a blinder in one side of the trial frame, and observing whether tilting the frame or the head to one side or the other improves the vision. Several such trials should be made, and if the patient is insistent on distinct visual improvement by the tilting of the frame or head, his statement should be confirmed by repeated rotations in the trial frame of the suspected cylinder.

NECESSITY OF RETURN VISITS

The importance of inspection and examination of opticians' lenses is obvious. I also instruct my patients to return after subsequent repairs if there is even a slight discomfort with the replaced lenses. I always request a return visit from new patients after they have worn their lenses for two or three months, whether or not they have had suspicious symptoms. Occasionally, I find an early reexamination of the refraction advisable. The sudden relaxation of the muscular strain, both intra-ocular and extra-ocular, may be followed by an early change in astigmatism, especially in the axis. In short, to be safe I always question the accuracy of any lenses that do not give reasonably continuous relief after several weeks' trial. In such cases, I explain that the early change of lens has been unavoidable and imperative; that the human eyeball is a living organism and hence subject to constant change, while the correcting lenses are unchangeable in physical qualities.

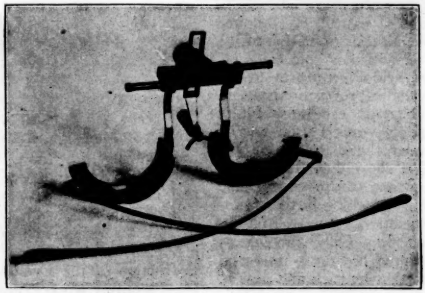

Fig. 2.—New model of trial frame, back view.

It is also my custom especially to direct my patients just when to return for routine reexamination. This time is fixed by the age and health of the patient, by the type of optical defect, the case history, and the previous changes noted. Generally speaking, a brief annual test should be made, to be followed by a complete reexamination if deemed necessary.

TEST CHARTS

I prefer to place my test cards at a distance of 6 meters from my patients' eyes, and on about the same level. For many years, I have employed block letters, showing white on a black background. These cards are not so likely to become soiled, and the letters are read with greater ease than on the white card with black letters.

I use a standard and invariable illumination with two 40 candle power Mazda lights and a parabolic reflector extending over the top of the cards, following the suggestion of Dr. Mortimer Frank of Chicago. However, it is likely that satisfactory illumination may be made from the side.

The test charts should be so placed that from the patient's chair no reflection is seen from the surface of the card. I have never seen a test card without a highly reflecting surface, and I always correct this by proper angling in the relation to the source of light and the position of the patient's head. The glare from the ordinary astigmatic charts especially renders them unsatisfactory, and only occasionally do I use them. In a trained patient, after a preliminary retinoscopy, the trial cylinders, properly employed, are quite sufficient for satisfactory results.

A comprehensive study of astigmatic charts has been made by Dr. Walter B. Lancaster of Boston, and he has constructed an improved chart in which the lines, instead of being printed, have been made with black velvet ribbon (baby ribbon No. 1 or 1½ in the stores) glued to a very white card of so-called "wedding stock." I have one of these charts in my office, but as I have already said I seldom have use for the astigmatic lines, and I have never found that they expedited my examinations.

OBJECTIVE METHODS

Objective methods are almost indispensable in cases of illiterate persons and children. They are great time savers in hospital and dispensary clinics, but I find myself relying on them less and less. The so-called optometers I have long since discarded. The ophthalmometer I use only in experimental study of corneal curves, especially after an operation or injury. I have never prescribed cylindric lenses from the ophthalmometric examination alone.

Retinoscopy, or the shadow test, is by far the most convenient and reliable of the objective tests, but it is only suggestive and not accurate. Although I employ retinoscopy constantly in my routine office work, in only a few cases is it indispensable; and I never allow it to influence my subjective findings. I have noticed that ophthalmologists who become so proficient in retinoscopy that they have allowed their objective findings to influence their subjective tests have not been noted for the accuracy of their prescribed lenses. The subjective methods of refraction must be the ultimate guide. In intelligent patients they can be practiced with absolute precision and in a comparatively short time; and it is in patients of education and culture that the ultimate fineness of correction is demanded. Only by subjective examination can the entire visual apparatus—from the end-organ to the visual centers—be tested.

Crude and speedy objective methods are adapted for refraction work only in the illiterate and lower dispensary classes. Illiterates not using their eyes intensely in close work are seldom sensitive to ametropic eyestrain. However, in illiterate seamstresses or similar eye workers, I always use the subjective methods with illiterate test charts, and never rest secure on my retinoscopic findings alone.

As soon as possible in children, and this in America is always at an early age, I attempt a careful subjective examination, and prescribe an accurate correction. In infants, of course, only retinoscopy is available; but I do not feel safe in allowing the retinoscopic correction to be worn more than two or three years without reexamination.

THE TRIAL FRAME

The prime requisites for the trial frame are rigidity, lightness, proper position on the face, and ease of general adjustment and manipulation of the trial lenses. There is also a necessity for individual adjustment of the two sides, to permit perfect binocular centering. The ideal trial frame would also allow independent bilateral, vertical and anteroposterior adjustments; but this would necessitate too much mechanism, and would be too expensive and too heavy. Such complicated construction is not necessary in ordinary office work.

It is most important that the trial frame shall be firmly and snugly placed on the sides of the nose and adjacent cheeks, in approximately the position in which the prospective spectacles or eye glasses will be worn. In this respect all frames fixed to mechanical instruments, such as optometers, are at fault, are often clumsy, and are signally deficient for accurate testing. The frame should be grooved and slotted to allow rotation of the cylinders at least 180 degrees. The rotation should be effected by light contact with the tip of the first finger. It is impossible to practice noiseless and smooth rotation, when using cells without handles. The placing of the trial lenses in the spring clips is awkward, disconcerting to the patient, and trying to the oculist. Only by the use of a properly grooved and slotted trial frame can the ideal examination of the refraction be made.

The ordinary trial frames seldom conform to the modern standards of skilful medical refractionists. In hospitals and dispensaries they are especially faulty and often ludicrous. For many years I used one of three trial frames made under the direction of Dr. George M. Gould. In 1917, I showed to this section a modification of this trial frame conforming to the modern requirements, but it was lacking in the necessary central universal adjustment. Last year, I exhibited at a meeting of the American Ophthalmological Society an improved trial frame having a universal vertical and horizontal adjustment by rack and pinion, placed in the center of the frame, permitting adaptation for any peculiar facial conformation.

The frame is grooved for two lenses. The front groove, for the cylinders, is slotted to allow rotation of the cells with handles. A third test lens may be placed in front of the frame, resting on three small hooks. The test lenses, carefully centered, should be placed before the eyes, properly inclined, and just clearing the eyelashes. The bridge of the frame should not wound the skin or cause irritation or pain. Rotation of the cylindric lenses must be easy, silent and unnoticeable, to prevent even momentary diversion of the patient's attention.

The bilateral independent adjustment is effected by two double screws, operated on the upper outer sides of the frame. The frame is placed on the face, quickly set by the universal adjustment, and supplemented when necessary by movement of the independent double screw adjustment, until the lenses are properly centered. Broad shell coverings on the inner sides of the two cell holders permit the snug application of the frame to the sides of the nose and cheeks. The nose piece proper is used only to fix and maintain the proper position. The graduated semicircles are enameled in dull black, and marked with distinct white lines and figures, allowing the maximal ease in reading the axes. The whole frame is finished dark and dull to prevent annoying reflections.

CYCLOPLEGICS AND MYDRIATICS

Unless they are contraindicated by age or disease, I always use a cycloplegic and mydriatic in the examination of refraction. Cycloplegia permits study of the static refraction, and mydriasis facilitates retinoscopy and ophthalmoscopy.

My routine custom is to instil from 1 to 6 drops of a solution containing homatropin hydrobromate, 2½ grains; cocain hydrochlorate, 1¼ grains; distilled water, 2 drams. I use this cycloplegic personally and exclusively in my private office, and never prescribe it for home use. If more than 1 drop is necessary, I instil the additional drops at intervals of fifteen minutes. I seldom use more than 4 drops. The cycloplegia may be partly corrected by the instillation of 1 drop of a 0.5 per cent. solution of physostigmin salicylate. Beyond a sense of slight twitching, there is no objection to the counteracting drop. In many thousands of cases, I have never seen severe untoward results from inducing cycloplegia according to the foregoing method.

Only occasionally for therapeutic purposes do I ever use a stronger cycloplegic; and then I prefer a 1 per cent. solution of atropin sulphate.

1931 Chestnut Street.

THE PRESENT STATUS OF REFRACTION WORK*

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CHICAGO

Following the track sparsely blazed by Young, Whewell, Ware and Airy, Donders cleared the ground and laid the foundations of modern ophthalmology. The obstructions in his path were many and formidable, but his genius enabled him to surmount them, and his epoch-making book on "Accommodation and Refraction of the Eye" at once raised ophthalmology from a purely empiric practice to a quasiexact science. When one considers that up to his time the true nature of hypermetropia, myopia and astigmatism was unknown, that asthenopia was classed as a disease, and that the instruments at his disposal were few and crude, one marvels at the mind that was able, out of this slough of ignorance, to evolve a science that immediately placed ophthalmology at the forefront of the medical specialties. How accurate and exhaustive were his investigations, and how sound were his conclusions is evidenced by the fact that although, since his day, a complicated superstructure has been raised on the foundation that he laid, not one stone thereof has been removed.

Since the publication of Donders' work until the present time, the ingenuity of ophthalmologists has been hard at work improving old instruments of precision and devising new ones, with the result that today our armamentarium is so extensive that there are few problems pertaining to the detection and measurement of muscle anomalies and errors of refraction for the solution of which there are not one or more excellent devices.

The question is, What are we doing with this rich heritage? Are the scientific principles and practical instructions handed down to us being applied in our

* Read before the Section on Ophthalmology at the Seventieth Annual Session of the American Medical Association, Atlantic City, N. J., June, 1919.

refraction work? I do not think that I am violating the canons of modesty when I assert that in no other country is better refraction work done than in the United States. The correction of the minor forms of astigmatism, with all the benefits that it confers, is more common in this country than elsewhere. And if I mistake not, the original advocates of the use of the quarter diopter cylinder were Chisolm and Gould, both Americans. Foremost among the investigators of the anomalies of the ocular muscles stand Stevens and Howe, and the latter's work, "The Muscles of the Eye," is the most comprehensive and exhaustive treatise ever published on the subject.

In recent years we passed through a rather sharp epidemic of muscle cutting; but that has blown over, and today more conservative methods prevail. The nonsurgical treatment of convergent squint is becoming more common, and in consequence, cases of postoperative exotropia are less frequent. Opticians tell me that bizarre prescriptions are less common than they were ten or fifteen years ago. Such gross errors as a + I sph — I cyl ax 180, are rare, but the more confusing combination of a + I sph — 0, 75 cyl ax 180 are still seen sometimes. More men are realizing that in ametropia the disturbed relations between accommodation and convergence play an important rôle in the causation of asthenopia, and that the study of the relative range of accommodation and convergence is not a "laboratory stunt," as it was at one time wont to be called, but an important factor in the problems of refraction work. There is a wider recognition of the fact that many of the phorias are the direct result of disturbances between these two functions, caused by ametropia, and that the sane procedure is to remove the cause rather than treat the effect thereof.

Taking these facts into account and further considering the excellent work being done by some of our leading men, we might deem the present status of refraction work eminently satisfactory. But the only trouble is that there is too much bad work mingled with the good; for it must be acknowledged that there is a lot of careless refracting being done, and some of it in places from which better things should be expected.

Examining the causes of this evil, we find that ignorance is responsible for the largest quota; but after making allowance for bad work due to inadequate training, a considerable percentage remains to be accounted for. Let us for a moment look into the causes of this percentage.

Strange as it may seem, we have to class among the fruitful causes of bad work the very means that enable careful and judicious observers to obtain their best results, namely, measuring devices. Ophthalmic measuring instruments are apt to fascinate the inexperienced observer, tempting him to surrender his judgment to their mechanical accuracy and deem their findings conclusive. The power of this fascination is to be seen in the tendency noted in some quarters to reduce refraction work to a quasimechanical process. The late Dr. John Murphy, in contending against this tendency as it affected surgery, used to say to his assistants, "Gentlemen, please remember that a diagnosis is made with the cortical cells, not with instruments."

Now, I do not impugn the use of devices for measuring refraction and muscle balance; they are indispensable, for they furnish us with data obtainable in no other way. But these data, as they apply to a given case, must be interpreted and this work must be done with the "cortical cells," for at times it is a problem requiring careful study and nice discrimination.

When, in the laboratory, instruments are used to investigate the properties of matter, their findings may be considered conclusive; but when, in the office, devices are employed to ascertain the muscular balance and the refraction of eyes, their findings are not conclusive, for their significance is modified by the general condition, special characteristics and idiosyncrasies of the person to whom the eyes belong. Two patients might each have a card with identical data regarding their refraction, accommodation and muscular conditions, but it does not follow that the two patients should be treated alike. One of them might need, in addition to the correction of his ametropia, orthoptic exercises, reconstructive or sedative medication and complete rest, while the other might be immediately relieved of all his troubles by a pair of glasses. In the practice of ophthalmology, as in the practice of medicine, the study of the individual is paramount.

Another factor in the production of poor refraction work is the plan, adopted by some oculists, of delegating this part of the work to young assistants, and in some instances, even to office attendants barely initiated into the rudiments of the science. When we consider that, because of the preponderance of refraction anomalies over other forms of ocular disturbances, this work more abundantly contributes to public efficiency by enabling children to acquire an education and fitting them, when older, to earn their living, and by preventing certain incapacitating eye diseases resulting from continued eye strain; its importance is so obvious and the results depending on its proper performance are so momentous, that delegating it to inexperienced hands seems like a sin against the public weal. Unless an assistant is thoroughly trained and has wide experience in this work, it would seem much wiser for the head man to do the refracting and to delegate to an assistant the routine treatment of cases.

If it is answered that the assistant's findings are carefully supervised, the reply is, that adequate supervision is equivalent to doing the work over, with the consequent loss of time, and that inadequate supervision is simply placing the mark of approval on what may be, and in the circumstances probably is, bad work.

Regarding the practice of eliminating the use of cycloplegics and of correcting the manifest error, I would say only that in my estimation it lacks the main elements of true scientific work. It is true that it has received the *conditional* sanction of some of the great masters, but somehow the sanction does not seem to harmonize with the precepts elsewhere given in their books. I realize that circumstances arise when fitting glasses in this manner is the alternative to doing nothing; but the patient should be warned that it is simply a provisional expedient and that the full examination should be made at the earliest possible moment. The only things that can be said in its favor are that it pleases a certain class of people by catering to their prejudice against the use of "drops," and that it is a quick and easy way of disposing of the case. But it should ever be borne in mind that in neglecting to ascertain the total error of refraction, the work is transferred to the field of conjecture. If the patient is 40 or more years old, this field has become so limited that one can fearlessly venture to estimate its boundaries; but in children and persons under 25, the mani-

fest error gives no certain indication of what may remain latent

In the moderate and high degrees of hypermetropia, the accommodation that masks the latent part of the error, taken in relation to the convergence necessary to maintain singular binocular vision, is responsible for most of the disturbances that bring the patient to the oculist. Correction of the manifest hypermetropia simply lessens the struggle of accommodation and convergence by the amount in meter angles corresponding to the dioptric power of the lenses prescribed. Why the normal relations between these two functions should not be at once restored, so far as they can be with glasses, is a question that the advocates of this method of refracting have never answered satisfactorily.

The tedious process of repeatedly changing glasses to correct the gradually increasing quota of manifest error seems to me both unnecessary and unduly hard on the patient's pocketbook. A young patient having a total hypermetropia of 4 or more diopters, with an absolute manifest of 1 diopter, usually has a long road to travel and many glasses to purchase before the ultimate goal is reached. The optometrists have not been slow in seizing the opportunity to instance the advocates of this method in pushing their claims for legislative recognition, alleging that the optometrists use the same method in fitting glasses.

The foregoing remarks may be classed under the head of personal opinions, and as such they are open to discussion. I do not entertain the hope that my comments will in the least affect the methods of those of my colleagues that happen to differ from me in opinion. My main object has been to point out to my younger colleagues some of the things that my experience has taught me to regard as pitfalls in the road to the accomplishment of good refraction work.

Let us now consider ignorance—or should I call it lack of adequate instruction—the source from which the largest percentage of bad work emanates.

It is well known that there are a large number of men practicing ophthalmology who neither by nature, education nor training are fitted for the work. If, with similar lack of fitness, some of these men were put to work in a factory where their jobs were inspected, their places would soon be vacant. But the blunders of medical men are not subject to inspection and have to be endured by the patient, until perchance he falls into the hands of a man who understands his business but who is deterred by ethical reasons from exposing the ignorance of his brother physician.

How prevalent is this lack of training was disclosed at the conclave of the American College of Surgeons held in Chicago in 1917, when the director reported that in the examinations held for fellowship in the college, the poorest papers were presented by the eye, ear, nose and throat men, and that only 2 per cent. were admitted to fellowship.

In days gone by, the excuse for ignorance was the lack of educational facilities. This allegation was true to a certain extent; but even when opportunity for instruction was offered, it either was not embraced or was embraced in such a perfunctory and indifferent manner that it was profitless. Especially was this true of the study of refraction.

My interest in teaching this branch of the specialty dates back many years. Under conditions more or less favorable, I have made five attempts to establish postgraduate courses in refraction. They were all failures because the men were not interested in this part of the work. My clinics and the operating room were always crowded, but on refraction days there was always room to spare. Indeed, and this is significant, the students seemed more interested in watching the assistants fit glasses than they were in learning the properties of the glasses and the nature of the anomaly that they were being fitted to correct. As one of them, who had been practicing ophthalmology for several years, put it: "You talk about a lot of things that I don't understand and that don't interest me. Those fellows out there are doing real practical work; and I am a practical man." I might add that a few days later in my clinic, this "practical man" diagnosed as plastic iritis, a typical case of acute glaucoma.

Within the last few years, things have changed for the better in the matter of opportunities for studying ophthalmology. There is now little excuse for ignorance, and it is to be hoped that in the near future ignorance on this subject will be inexcusable.

The University of Colorado School of Medicine has established a course in ophthalmology under the direction of Dr. Edward Jackson of Denver. The minimum term is one year, with the advice to extend it one year longer. On passing a satisfactory examination, a diploma of Doctor of Ophthalmology is conferred. The University of Minnesota Medical School also has a one-year course in ophthalmology and confers a degree of Doctor of Ophthalmology. Both these institutions offer a thorough course of instruction in physical and physiologic optics, refraction and accommodation, and muscle anomalies.

The American Board of Ophthalmic Examiners, acting in conjunction with the American College of Surgeons, is endeavoring to sift the good from the bad by holding examinations and issuing certificates to men who have proved their fitness to practice ophthalmology. As this board acts as the committee on credentials of the American College of Surgeons, its certificate entitles its possessor to fellowship in the college.

I am informed that the examining board is not overburdened with work. This was to be expected. A certain class of medical men have been drifting for years into ophthalmology, most of them through the door of six weeks' postgraduate courses. They have been practicing the specialty to their own satisfaction and profit, caring little whether or not their qualifications were brought into question. Is it reasonable that such men shall of their own free will submit to an examination which they feel themselves unable to pass? It would be absurd to expect such a thing. It is to our younger men that we must look for the realization of all hopes for higher standards. To enable these men to obtain adequate training in ophthalmology, it will be necessary that more of our medical colleges follow the noble example set by the University of Colorado and the University of Minnesota.

Further, as a protection to men who have taken the pains properly to fit themselves for the specialty, postgraduate schools and institutions devoted to the treatment of eye diseases should refuse to give certificates for a few weeks' attendance, should establish courses of at least four months in which all the branches of the specialty should be taught, and should require a satisfactory examination in all these branches before issuing a certificate. I fully realize that such an inno-

vation would seriously affect some institutions, but if the standard is to be raised and men working to attain this standard are to be protected, it will be necessary to "hew to the line, let the chips fly where they may."

To encourage the establishing of schools of ophthalmology in our medical colleges, and to induce the managers of postgraduate schools and of eye institutions to adopt longer and more thorough courses of training would require the cooperation of the medical fraternity at large. This cooperation could be secured, I believe, by a concerted propaganda carried on by our national, sectional and local ophthalmologic societies.

Without the cooperation of the medical profession at large, little or nothing can be accomplished. So long as incompetent men that drift into ophthalmology by a cheap and easy short cut are put on a par with men who have traveled the hard and costly road, there will be little inducement for the latter to make the effort. But if medical men would lend their aid by giving preference to these worthy young fellows, not only would many more of them strive for the highest standards, but also, it would induce others, who hitherto have cared little about standards, to improve themselves and apply to the Board of Ophthalmic Examiners to prove their competence and their rights to the confidence of their professional brethren.

CORRECTION OF THE MUSCULAR ANOMALIES OF THE EYES

SECOND IN IMPORTANCE ONLY TO THE CORRECTION OF THEIR FAULTS OF REFRACTION *

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BALTIMORE

Unless my experience in dealing with asthenopia is very exceptional, and the deductions drawn therefrom entirely misleading, ophthalmic practitioners, as a rule, are inclined, it would seem, to minimize the importance of the muscular anomalies of the eyes, and to lay relatively too great stress on their refractive faults as etiologic factors in this condition.

This conviction, if I may call it such, is due, in considerable measure, to the fact that in asthenopic patients that come into my hands after having been given glasses by other ophthalmologists, it is so often found that, though great pains evidently have been taken to correct even minor faults of refraction, grave muscular errors have been entirely overlooked, or, if detected, have been ignored in the glasses prescribed.

Then, let one turn to the tables of "affections of the eyes treated" in the annual report of almost any ophthalmic hospital, and note the striking contrast between the large number of cases of anomalies of refraction and accommodation and the insignificant number of latent muscular faults there recorded. For example, in a recent report of a well-known hospital for diseases of the eye, ear, nose and throat, I find under the heading "Anomalies of Refraction and Accommodation" 2,819 cases tabulated, while I fail to find in the tables mention of a single case of latent muscular fault, a single instance of heterophoria. In another report of the same institution, I find four cases of exophoria recorded—no mention being made of other latent muscular faults—while 1,340 cases of anomalies of refraction and accommodation are included.

The report of another eye and ear hospital, one of the largest and best known in the United States, shows a similar, marked contrast—10,854 anomalies of refraction and accommodation are mentioned, and only twenty-three cases of latent muscular faults, five of esophoria, eighteen of exophoria and one of hyperphoria. Quite as remarkable is the fact that during the period covered by this report, in which only these twenty-three cases of heterophoria were observed, there were recorded no less than 537 cases of convergent and divergent strabismus. A later report of this same institution, made in 1917, gives 7,581 refractive anomalies, 541 convergent and divergent squints, and only three cases of heterophoria, while the report for the same year of a well-known hospital for diseases of the eye, ear and throat, in New York, records 2,849 refractive anomalies, 283 cases of strabismus, and only two cases of heterophoria.

The inevitable conclusion to be drawn from these figures, it seems to me, is that in these institutions, and not improbably in the majority of similar institutions throughout the country, the latent muscular faults of the eyes—and it is, of course, these *latent* faults, not the manifest faults, the squints, that give rise to asthenopia, headaches, etc.—are in large measure ignored in the routine examinations of the eyes of patients who apply for the relief of asthenopia.

The disposition on the part of so many ophthalmologists to underestimate the importance of the muscular faults of the eyes and to center their attention on the faults of refraction is, I believe, due chiefly to the fact that muscular imbalance is not infrequently largely, and sometimes wholly, dependent on errors of refraction, and is lessened or may be entirely done away with when these errors are corrected by suitable lenses. This circumstance, indeed, has led certain extremists to deny the existence of "muscular asthenopia," and to contend that this condition is, in all cases, due to a refractive fault, and is eliminated by the correction of this fault. And, it may be added, there are also extremists—very few, it is true—who hold exactly the opposite view, who insist that muscular imbalance is in nowise dependent on anomalies of refraction—manifestly a still more bizarre conception.

While the views of these extremists do not deserve serious consideration, it has seemed to me well worth while to utter a word of warning against what I believe to be the present trend of ophthalmic practitioners to belittle the importance of these latent anomalies of the ocular muscles.

The point that I wish to emphasize is, as I have said before,[1] that "although heterophoric conditions, because less common, are not so frequent a cause of asthenopia as are errors of refraction, they are quite as capable of producing the manifold symptoms, local and remote, which we have learned to attribute to eyestrain." And further, that "while it is true refractive errors, when present, markedly influence . . . muscular faults, there are muscular faults . . . which are in no sense dependent upon ametropia, and which

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1. Theobald, Samuel: Prevalent Diseases of the Eye, Philadelphia, W. B. Saunders Company, 1906, p. 466.

are just as real as ametropia itself."[2] To many of my colleagues these assertions will doubtless sound decidedly sophomoric; but to many more ophthalmic practitioners throughout the country they may perhaps prove helpful, if taken to heart.

It is my clear conviction that, unless the ophthalmologist in every case of asthenopia determines the muscle balance, he does not do justice either to his patient or to himself, and this determination of the muscle balance, as I long since pointed out,[3] should be made not only for distant vision, but for near vision as well.

To one unaccustomed to making these tests, or to one who has been in the habit of employing the cumbersome and unnecessary apparatus used by many in making them, this may seem a hardship; but, as a matter of fact, only a few moments are required to obtain the information desired. A candle flame or a small electric light at 20 feet, a prism—by preference in most instances one of 4 degrees—taken from the trial case and held vertically before the eye, and a multiple Maddox rod enable one, with very little expenditure of time, to measure with exactness the lateral and vertical muscle balance for distant vision; while a prism of 7 degrees, to induce vertical diplopia, and an asterisk printed on a card, to encourage accurate accommodation, as a test object, will enable one—with the aid, of course, of lenses taken from the trial case—to determine almost as quickly the lateral muscle balance at the reading distance, while the Maddox rod, supplemented by the invaluable Schild's pinhole light, will give the vertical muscle balance for near vision. I may add that I waste no time in trying to discover how strong a prism, held with its base horizontal, the external or internal rectus muscles are able to overcome, as I long since reached the conclusion that this is a question of *knack* rather than a trustworthy determination of the relative strength of these muscles.

While these muscle tests should be made at the outset of the examination, because the findings are less trustworthy after the eyes become fatigued, and because, moreover, they afford an important indication as to the glasses which should be prescribed for the correction of any refractive fault that may be present, they should of course be repeated later with any such fault carefully corrected.

How one should deal with heterophoria depends in large measure on whether the condition is due to an *actual* fault of the muscles themselves, or whether the muscle fault is only apparent, that is to say, is solely or chiefly caused by an error in the refraction of the eyes. In the latter case, correction of the anomaly of refraction may be relied on to eliminate the muscular imbalance. In the former case, prismatic glasses are indicated if the imbalance is not marked, and one or more tenotomies or, as some prefer, an advancement or a tucking operation, if the muscle fault is more considerable.

Refractive errors, it may be remarked, though they radically influence esophoria and exophoria, have little influence on hyperphoria, except that pronounced anisometropia tends to favor its development, as, indeed, it does that of both vertical and lateral squint, because in this condition the stimulus to binocular fixation is always lessened and not infrequently entirely abolished. Under such circumstances, the prescribing of lenses which correct the anisometropia, especially if these bring the vision of each eye approximately to normal, will at times entirely eliminate heterophoria, and may even correct well-marked squint.[4]

I have already spoken of the importance of testing the muscle balance for near vision as well as for distance in the examination of asthenopic eyes, but I consider this a matter of so much importance that I feel impelled to refer to it again before concluding this paper. The fact that, not infrequently, there is marked discordance between the behavior of the muscles at the reading distance and in far vision does not seem to have received the general recognition which it deserves. This discordance one finds not only in the lateral muscles but occasionally in the vertical muscle balance as well. Not so very rarely I have encountered hyperphoria which was present in near vision and absent in distant vision, and in other instances the conditions have been reversed—hyperphoria in distant vision and vertical orthophoria in near.

Of greater practical importance, however, is the fact that unless the muscle balance at the reading distance is known, the existence of subnormal accommodative power—the muscle fault which, in my experience, is oftenest overlooked—cannot be recognized. The detection and correction of this anomaly is, in many cases, so helpful that if nothing else were gained by the near muscle-balance tests, this alone would fully repay the time and trouble involved in making them.

2. Theobald, Samuel: Prevalent Diseases of the Eye, p. 468.
3. Theobald, Samuel: Tr. Am. Ophth. Soc., 1904.
4. Theobald, Samuel: Notes of Two Cases of Squint and One of Esophoria Due to Anisometropia in Which the Muscular Anomalies Were Cured by Glasses, Am. J. Ophth., February, 1890.

ABSTRACT OF DISCUSSION

ON PAPERS OF DRS. EMERSON, PYLE, GARDINER AND THEOBALD

DR. EDWARD JACKSON, Denver: Dr. Emerson has given us a new point of view in a part of our work in which many of us are in ruts, and are more and more liable to get into deeper ruts. First, headache or similar symptoms are not thrust into the system like a foreign body. It is not an external injury. The symptoms are all reactions against something, and are only to be understood and explained when we approach them from the point of view that the reaction is for the good of the organism. It may be a reaction, painful and harmful in many ways, but the reaction exists because it can do some good for the organism which reacts. The patient does not have headache simply because he has had eyestrain, but because of other things that are peculiar to him or to his whole make-up, eyestrain produces this peculiar effect. Headache is a symptom or reaction provoked by three or more conditions. The particular value of eyestrain in connection with these symptoms is that it is one factor which we can remove, and unless removed possibly all symptoms will recede immediately, or more gradually. With reference to saving the nervous system from strain, and not aiming to get the best possible vision, there can be no question that very often that is the thing to be done, but in a general way, the greatest saving of strain is by giving the easiest and clearest vision, with the least effort. If a patient sees a thing clearly, other things being equal, he will see it more easily than if it is blurred. And if the person should get overblurring and strained vision, he cannot overcome blurring by strain. Therefore, the accuracy referred to by Dr. Pyle, is an important element in giving freedom from the strain. And that accuracy cannot be too extreme. If you can get rid of the possible recurring strain, even though it is very small, you will have made the nervous system safer from future bankruptcy. There is a strain which comes from trying to see under new conditions, and we need to consider that more than we do in

prescribing corrective lenses. In many cases, the serious cases referred to us by the internist the strain may prove fatal, as the patient may give way under the first strain and go on to complete invalidism.

DR. ALBERT E. BULSON, JR., Fort Wayne, Ind.: The appropriate correction of errors of refraction requires as much skill and as much judgment as anything connected with the practice of ophthalmology, and yet it is a branch of our work which receives the least consideration by a very large proportion of our members. So much refraction work is so hastily performed and of such superficial character that there is little wonder that many patients wander from one specialist to another in attempts to obtain relief that could be obtained if more care was taken in determining the error of refraction and more judgment exercised in the prescription for the individual case. It is, therefore, quite appropriate for a distinguished internist to call attention to our defective work, and especially as it pertains to a class of sufferers, many of them neurotics, who require painstaking and accurate determination of the state of the refraction, and a prescription for glasses based on the study of the individual patient's peculiar needs in order to aid the internist or the neurologist, as well as ourselves, in securing that relief which the patient desires and should have. The point is well taken that we should fit glasses to the patient's nervous system as well as to his eyes, and that keenness of vision—either with or without glasses—is no indication that the patient is not suffering from strain which is producing a tax on the nervous system that is causing discomfort for the patient. Much difference of opinion exists as to the methods to be adopted in the examination of refraction patients, but in my experience—covering a good many years and an abundance of material—I find that the most satisfactory results, to me as well as to my patients, are those which follow the most exhaustive and painstaking examination, coupled with a careful study of the patient himself and of his ocular needs. The prescription for glasses should not be written until after the static refraction is known and the retinoscopic findings checked up carefully by subjective tests. I have the utmost confidence in the value of a retinoscopic examination performed accurately under proper conditions. In the final analysis we are confronted with the proposition laid down by Dr. Emerson, which in effect is that we must fit the glasses to the patient's nervous system as well as to his eyes, and to do this requires the highest expression of our art.

DR. THOMAS B. HOLLOWAY, Philadelphia: A careful and accurate refraction is not based on the refraction of the eye alone, but is essentially a refraction of the patient.

It is true that much bad work is still done, but I am optimistic along this line and believe that the character of our refraction work has improved. Whatever appliances and methods are used, certain preliminary data must be obtained with due consideration of accommodation, convergence and the various phorias. The question of assistants is an important one, but not a difficult one, for no one should be given the duties of an assistant until he has had considerable fundamental training. I fear that the question of a cycloplegic will continue to be discussed for years to come. In the main I heartily agree with the essayist in his insistance on its use. I always use it under the early presbyopic age, the exceptional case excluded. As to proper training, I question whether ophthalmology is any worse off than the other branches of medicine. I do not believe in special courses in refraction unless the individual has had a basic course in ophthalmology or is seriously devoting his time to the subject. Dr. Gardiner touched on an important point when he refers to postgraduate instruction. Such a course should not be of less than four months' duration and all students must be examined. It is far better that the student be drilled in fundamentals than that he be fed up on operative clinics as usually conducted and in the attendance of which much time is wasted.

DR. ISAAC HARTSHORNE, New York: Not until three or four years ago did I begin to realize that some of my patients had an improper ratio between abduction and adduction which was not demonstrated by the ordinary Maddox rod. Consequently, the testing of abduction and adduction with a rotary prism has been made as definite a routine as the Maddox rod test. Clinically there is often little difference between the symptoms of convergence insufficiency and divergence excess, though the latter seems to produce less trouble than the former. Technically and therapeutically there is a marked difference. Some of the cases with convergence insufficiency have retained the proper ratio (1-3) between divergence and convergence, and hence present also a divergence insufficiency. As causes of muscle imbalance, I wish to emphasize muscle weakness, refractive errors, and disturbances of innervation as probably being the most frequent causes. Apparently heredity plays a part, as often several members of the same family are affected. Apparently men and women are involved about equally. Myopes seem to be less affected than hyperopes, which has led me to believe that a great deal of convergence insufficiency is simply muscle fatigue, that is, muscle staleness, akin to athletic staleness. The treatment of convergence insufficiency calls for differentiation as to the reason for the insufficiency and careful judgment as to what should be done in the individual case. No routine treatment can be adopted to apply to all cases. The physiologic treatment of this condition is carried out by: (1) so-called finger exercises; (2) exercises with prisms, base out, and (3) the stereoscope. The most important procedure of all is a careful correction of refractive errors after cycloplegic examination, with special attention to the accurate finding of the astigmatic amount and axis. It is equally important to obtain an accurate grinding of the prescription as ordered. In a great majority of these cases this treatment alone will suffice. It is for the few who need further care that other procedures are also necessary.

DR. ALEXANDER DUANE, New York: With regard to headache, two points are to be emphasized: First, that we ought always to look beyond the obvious cause. Second, that headache is usually complex in origin. The oculist, in fact, has to take a broad view, including aspects outside his own specialty, and, in particular, must, as Dr. Emerson says, consider the patient—his age and the fixity of his habits, his idiosyncrasies, his mental, moral, and physical make-up, the exactions imposed by his occupation or surroundings, and finally his maladies, obvious or latent. In my experience, homatropin, properly applied, usually gives results as reliable as those obtained with atropin, and, what is important, if in any case the results are unreliable, there is generally evidence of the fact in the findings. If one measures the range of accommodation during the progress of the homatropin cycloplegia, makes his examination when the range is low, and in the few cases in which the range continues high and the results vary, then resorts to atropin, he will have little reason to complain of inaccurate findings. I am a little surprised to hear Dr. Pyle characterize skiascopy as "only suggestive and not accurate." This is the case if skiascopy is performed without heed to the precautions that should be taken, but that is true of any method. Except in the case of very young children, in whom we have to rely on objective methods exclusively, I have followed a definite routine. Rarely is there any difference between the skiascopic and the subjective determination. When such a difference exists, skiascopy often gives aid in determining the precise—not the approximate—finding. But if there should be an irreconcilable difference, I would feel with Dr. Pyle that the subjective test is the court of last appeal. In most cases, except those of nonpresbyopic myopia, I make a postcycloplegic test, preferably about a week after the instillation of the homatropin. With Dr. Theobald I agree that the muscular tests should be made for near as well as for distance. I do not quite agree with Dr. Theobald that tests in overcoming prisms, particularly prisms, base in, are useless, and I decidedly take issue with his statement that subnormal accommodation can be recognized only by taking the muscle balance at the reading distance. The proportion of cases in which heterophoria causes trouble is hard to determine. The diagnosis has to be made by exclusion. In some cases the symptoms from the

start are evidently due to disturbance of the exterior muscles of the eye, and in that case treatment of the latter should be initiated at once.

DR. W. W. KAHN, Detroit: Formerly we sent our patients to the internist, and now the internist sends them to us. We have reason to congratulate ourselves on the energy and the proficiency obtained in our work. Dr. Emerson's paper gives the thought that the eyestrain symptoms are closely connected with the bodily health. In order to get our best results in refraction, it is absolutely necessary that we see that the other troubles in the patient are corrected. I try to cooperate with our general practitioners and specialists to get the patient into the best possible health, and in that way to get the best results through refraction. There are no anastigmatic eyes. Dr. Gould himself says he never saw an anastigmatic eye.

DR. SIDNEY L. OLSHO, Philadelphia: I have used a trial frame like Dr. Pyle's. In certain respects my trial frame differs slightly.

(Dr. Olsho gave a blackboard demonstration of his trial frame. A full description will be published in the transactions of the section.)

DR. JOHN GREEN, St. Louis: Since I have been systematically using Lancaster's charts I am convinced that I determine the axis and strength of the cylinder with greater accuracy than ever before. After all, it is the postcycloplegia test which determines the prescription, and it is precisely in determining the exact axis of the cylinder under these conditions that Lancaster's charts excel. It is a truism that the axis "under drops" and the axis "after drops" may differ. With Lancaster's charts it is possible with most patients to determine the axis within five degrees and the strength of the cylinder to from 1 to 8 diopters. I question very much whether the method of determining the precise axis by having the patient observe the gaps in small letters and indicate the "stop" point of a rotating cylinder can be equally exact.

DR. WILLIAM H. WILDER, Chicago: The older members of the section will recall the time when we asked the internists to recognize the fact that headaches may be produced by such a mythical thing as eyestrain, We must not forget the fact that ophthalmology is only a branch of medicine, and that the eye is not differentiated from the other organs. It behooves every ophthalmologist to remember that he is also a physician, and that he must take and study the case as a whole. Headache is a symptom with which we must reckon. These headaches take place in a class of individuals who have nerve fatigue. The individual's nervous balance is upset, and we must try to straighten it out and save him from a fall. When we have convalescence from a serious disease, we cannot give the patient tasks to perform which he might do when in normal health. And here I offer a word of suggestion to the internist, not to imagine that these patients can use their eye muscles as readily as they did in health.

DR. C. J. SAVAGE, Nashville: I will refer to some cases of muscular errors in which existed cyclophoria, a condition not mentioned in any paper or discussion so far this morning. A man who had, in spite of difficulties, grown to be a great banker, found himself confronted with an offer of a high position in a New York bank. He knew the physical condition of his eyes was such that he could not undertake the greater work. These were his errors, as I found them: Left hyperphoria 4 degrees plus cyclophoria 8 degrees, and exophoria 14 degrees. The complication of plus cyclophoria was the condition which made him carry his head toward his right shoulder, in which position he could see single with his two eyes. With head erect he had double vision, and the doubling was worse if he attempted to carry his head toward the left shoulder. I did a nasal marginal tenotomy of the left superior rectus, and a central tenotomy of the left external rectus. From that time to this he has been comfortable in the work of his new position. Another man had since childhood been wholly unable to maintain binocular single vision, the right eye being the one which would turn always directly out. The monocular phorometer showed him to have exotropia of 26 degrees and plus cyclotropia of 17 degrees. I made an upper marginal tenotomy of his right externus, and ten days later made a right marginal tenotomy of his left externus. Following the first operation there was binocular single vision, which was made easier by the second operation.

His cycloexotropia has been transformed into practical orthophoria. He has binocular single vision at all times, and is comfortable in his work. The cyclophorometer still shows probably 2 degrees of plus cyclophoria. A third man, an army surgeon, was wearing a plus one and one half prism base down for the right eye, and also a plus one and one half prism, with base up, before the left eye. With a monocular phorometer I found him without any hyperphoria, perfect balance of the vertically acting muscles. He had 6 degrees of exophoria in the near, and the cyclophorometer showed him to have 70 degrees of plus cyclophoria. I did an upper marginal tenotomy of both externi. Five hours after the operation, he had no cyclophoria at all. The Maddox rod is wholly useless in testing the recti muscles, but constitutes the very best test for imbalance of the obliques, that is, after cyclophoria.

DR. H. B. LEMERE, Omaha: Patients are sometimes exhausted and suffering from symptoms. That is why they come to you. You give them a test chart with the light coming through frosted glass, with black letters on this glass. You are going against all laws of illumination. How can this be remedied? The test-chart should be illuminated by indirect lighting. I made such a chart with a draughtsman's board, two lights and two parabolic reflectors. The light in every meridian is the same. There is no shadow from any object erected in the middle of the chart. Many cases of refractive error change from day to day and from week to week, and these cases under most complete cycloplegia will change both in the axis of the correcting cylinder and in its amount. What is this change due to? It is not due to the ciliary muscle. In the large percentage of the cases I have found these cases show minute changes in the macular region, causing the variations in refraction. This condition will be overlooked unless the macular region is inspected very carefully. The ophthalmoscopic examination must be made after the subjective test; otherwise a scotoma from such an examination of the macula as I have found that about three seconds' observation of the region are necessary to observe the changes.

DR. LINN EMERSON, Orange, N. J.: This symposium on refraction would not be complete without registering a protest against the so-called library and Windsor style of frames. With the objection to spectacles, it is entirely artificial, as we all remember that 10 years ago we could not get young women to wear spectacles. They insisted on glasses because they were more stylish. Now, all the girls will go out and get a pair of these ugly library spectacles. Why? Because they are fashionable. The lenses are too large and widely separated, particularly if they are bifocal. And what is worse than all the rest is those lenses turn in the frame. If you must wear them, make the lenses slightly oval so they cannot turn, or that the lenses may be marked at the hinge, so that they can be seen to be out of proper axis when such is the case.

DR. OLIVER TYDINGS, Chicago: The whole question is one of diagnosis. The man most accurate in diagnosis finds fewer of those cases. A patient had intolerable headaches for three or four years, and they were absolutely relieved by removal of the tonsils. As to cycloplegias, I have used scopolamin almost exclusively in my practice. Where I cannot use scopolamin, I use atropin; but you can get as good results from scopolamin in three-quarters to one and one-half hours, as you can get from the use of atropin in 56 hours. I fully endorse what Dr. Savage said about the Maddox rod, and what Dr. Theobald said about the necessity of accurate muscular measurement.

DR. DUNBAR ROY, Atlanta, Ga.: I agree with Dr. Emerson's view in the main, but he has not gone far enough in suggesting a remedy. The reason why some ophthalmologists relieve their patients by the fitting of glasses is the fact that they study the individual in all his or her

environments, not simply as an eye case. This efficiency is obtained by long experience. I agree with the essayist that it is the low degree of error which produces the neurotic symptoms. In advancing the plea for a more thorough use of atropin, I think he is wrong unless he qualifies it by having the examination made after the mydriatic effect has entirely subsided. Patients and doctors are not willing to wait. Homatropin is not a cycloplegic in the true sense of the word. If you want to examine an eye where the accommodation is paralyzed you must use atropin. If you only want a mydriatic you can use homatropin unless the pupil is too small for one to use retinoscopy or to get a clear image with the ophthalmoscope. When a cycloplegic is needed it is atropin. I rarely use either in patients over 20 years of age. When a patient needs glasses he needs them when his eyes are in their natural or normal condition and not when the muscle of accommodation is partially paralyzed. This is the reason why opticians so frequently fit patients with comfortable glasses where the ophthalmologist has failed. Another great trouble is the having of a fixed distance to which reading glasses are fitted. Some patients want a close focus in their work, others want a very long focus. This idea that the reading distance for every individual must be at 12, 13 or 14 inches is wrong. The workman who only reads the evening papers and uses his glasses for driving nails and putting names in his day book on the counter, does not need a glass like the student and architect, who must see every line and angle in his work. For distant glasses the patient needs glasses for infinite distance, not 20 feet. Twenty feet is not infinite. Let him go to the window and look out for two blocks away and see if the glasses suit him. Another feature which is wrong. The big trial frames are a nuisance. I am sorry to see Dr. Pyle refer to those cumbersome trial frames as pictured in his paper. They are a nuisance and should be abolished. The patient is more concerned with the heavy frames on the nose than he is about the acuity of vision. He does not know which is the discomfort, the glasses or the frames. Have a swing frame in front or a one groove aluminum. The essayist is right. Work with the internist but use more common sense in doing your refractive work.

DR. A. E. DAVIS, New York: I have been especially pleased and instructed by the paper of Dr. Emerson, who has emphasized the fact that the eyes are something more than two optical instruments set in the front of the head. The eyes are indeed a vital part of the complex organism of the entire body and in fitting and adjusting glasses we should bear this point in mind. His description of those cases of eyestrain associated with sick headaches, migraine, the phobias, etc., is highly illuminating and his insistence that in such cases the combined efforts of both the ophthalmologist and the internist are required, is sound teaching. In these exceptional cases I am in entire accord with the dictum that the entire static error should be ascertained by the full use of a true cycloplegic, as atropin or scopolamin and not the use of the so-called cycloplegic homatropin. In such cases all the objective tests should be made and then the crucial subjective tests, inciuding muscle balance. The tests should not be prolonged too far at a single sitting, unless, as Dr. Emerson says, the patient becomes fatigued. In such instances the patient is uncertain what he does see, and I may say, the examiner is often uncertain of what he is trying to do. In the ordinary refraction patients above fifteen years of age, I do not use cycloplegics as a routine procedure, reserving cycloplegics for exceptional cases where there are indications of spasm of accommodation in children in squint cases, and in the class of cases spoken of by Dr. Emerson. In reference to the point made by Dr. Gardiner that no satisfactory answer had been forthcoming, why in high degrees of hypermetropia the normal relations between convergence and accommodation should not at once be restored so far as they can be with glasses (full correction), is a question that the advocates of a partial correction of the hypermetropia have never answered satisfactorily. I may say that Landoldt answered this question long ago when he showed that the ciliary muscle could work comfortably with only one third of its power in reserve, whereas the converging muscle must keep two thirds of its power in reserve. In all cases with rare exceptions I test the muscle balance. However, I give prisms only for the correction of vertical deviation.

DR. CHARLES P. EMERSON, Indianapolis: One of the chief duties of a teacher of internal medicine is to disabuse the minds of his students of the use of those terms which we call "semaphore" phrases. They stop a train of thought. Such words are migraine, neurasthenia and cycloplegia. To judge of the asthenia of the patient is my function, and while it might be desirable for the ophthalmologist to get some idea of whether his patient is thenic or asthenic, it took us two or three hours to do so, and you should ask us concerning the results of the nervous reactions of this patient, and then you should confer with us as to whether those particular symptoms should be corrected by eyeglasses, or whether we should proceed farther in seeking for the cause of eyestrain. Some of the cases have been those of asthenia, and you have told us they were cases of ciliary hyperatrophy. You told us these cases were the ones in which we required repeated attention in giving them what was desired.

DR. WALTER L. PYLE, Philadelphia: It is a great satisfaction to hear from a well known internist such an excellent exposition of the problems relative to eyestrain. Dr. Emerson's fear of the narrowness of the specialty of ophthalmology will soon be unwarranted. From my experience in private consultations and professional meetings, no specialist is finding closer or more numerous interrelations with the whole science of medicine and surgery than the oculist. In ophthalmic meetings no subject is more popular than medical ophthalmology, or neuro-ophthalmology; and some of the established methods of medical diagnosis have been elaborated chiefly by observations and experiments of ophthalmologists. Dr. Emerson's warning against "overkeenness of vision" is significant of too frequent overcorrection of myopia or undercorrection of hyperopia, circumstances which should never occur if preliminary cycloplegia is used, and proper methods of examination of refraction employed. Dr. Emerson issues a very proper plea for personal work in the examination of refraction. I always do my refractive work personally. In regard to the invariable use of atropin, I do not believe that this is wise. Prolonged cycloplegia and mydriasis often greatly interfere with the best subjectice examinations. A more transient cycloplegic such as homatropin, used in the manner I have stated, generally gives better results, and more often makes evident the complete optical defect sooner than the old fashioned prolonged use of atropin. I agree with Dr. Emerson that each patient should be studied individually, and that the proper prescription for lenses should be determined only after a consideration of all the associated physical, physiologic and psychologic elements. I am in general agreement with Dr. Gardiner's statements. With few exceptions, I am in accordance with Dr. Theobald. In every case, I measure and record the heterophoria. These records are always preserved with those of the optical examinations. The report of the Committee on Ocular Muscles gives striking evidence of the thorough and deliberate way in which they are studying the pertinent questions of this unsettled subject.

DR. EDWIN J. GARDINER, Chicago: I want to insist on the use of a cycloplegic for thorough paralysis. A case is not refracted unless accommodation is paralyzed. Unless you have the accommodation paralyzed you cannot get the combinations of the ciliary nerve with the external muscles of the eye. The physician should have the full condition reported, and he cannot report the full condition without that information.

DR. SAMUEL THEOBALD, Baltimore: A number of those who have read the papers and spoken on the subject have mentioned that they used the Maddox rod—I suppose we all mean the multiple Maddox rod—in testing the lateral muscular balance. I want to protest that the multiple Maddox rod is the ideal test for vertical hyperphoria. I believe it is absolutely misleading and untrustworthy when used for testing the efficiency of the lateral muscle.

PROCEEDINGS OF THE ATLANTIC CITY SESSION

MINUTES OF THE SEVENTIETH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT ATLANTIC CITY, JUNE 9-13, 1919

(*Continued from page 1769*)

HOUSE OF DELEGATES

Third Meeting—Tuesday Morning, June 10

The House of Delegates met at 9:30 a. m. and was called to order by the Speaker.

The Secretary read the minutes of the previous meeting.

Dr. M. L. Harris, Illinois, moved that the minutes be approved as read.

Seconded and carried.

Supplementary Report from Committee on Credentials

Dr. C. P. Meriwether, Arkansas, Chairman, presented a supplementary report from the Committee on Credentials, stating that 119 delegates had registered, all of whom were entitled to be and were seated in the House.

It was moved and seconded that the report be approved. Carried.

Report of Committee on Sections and Section Work

Dr. George D. Head, Minnesota, Chairman, presented the report of the Reference Committee on Sections and Section Work, as follows:

Your Committee on Sections and Section Work, to which was referred the report of the Council on Scientific Assembly, submits its report as follows:

First, the action of the Council on Scientific Assembly, separating the division of section work into two groups, one group to meet in the morning hours and the other group to meet in the afternoon hours, is approved. This committee recommends to the House of Delegates that the Council on Scientific Assembly be authorized to continue a further trial of this plan at the next annual meeting of the Association.

Second, your committee approves of the recommendation of the Council on Scientific Assembly, limiting the number of papers including addresses on the program of any one section to twenty-five, and recommends to the House of Delegates the rereferring of the amendments suggested by the Council in order to make this change effective to the Committee on Amendments to the Constitution and By-Laws for proper action and report.

GEORGE DOUGLAS HEAD, Chairman,
S. R. ROBERTS,
J. B. BLAKE,
L. S. MCMURTRY,
JOHN RIDLON.

This report was considered in two separate sections as presented, and on two separate motions, which were duly seconded and carried, the report was adopted, and Part 2 was referred to the Reference Committee on Amendments to the Constitution and By-Laws.

Report of Reference Committee on Medical Education

Dr. J. H. J. Upham, Ohio, Chairman, read the report of the Reference Committee on Medical Education, as follows:

Your committee, having carefully considered the reports of the Council on Medical Education, is especially impressed by the continuous progress made under the auspices of the American Medical Association and its efficient Council. The chief factors contributing to this result, it appears to your committee, are the surveys made by the Council, the publicity given to the results of the surveys, and the annual conferences held with representatives of the medical schools, state medical examiners and other agencies interested in medical education.

Your committee would recommend that the council be instructed to urge state boards of medical examiners to utilize to a greater extent the information gathered each year by the Association with reference to the student body. It would seem that an arrangement might be effected which would avoid the multiplicity of reports now enacted from the medical schools.

The attention of the members of the House of Delegates should be especially called to the facts set forth in Table 5, included in this council's report. This table shows that in some of the states the public is not safeguarded from poorly trained doctors. Attention is called particularly to the footnotes where appear the figures for Arkansas, California, Colorado, Missouri and Texas, in which large numbers of graduates of Class C medical colleges have been licensed either by examination or by reciprocity. It is evident from the facts set forth in this table that we are still far from an ideal situation in regard to medical education and licensure in the United States.

The committee endorses the program of the Council with reference to (*a*) medical education and licensure; (*b*) preliminary medical education; (*c*) reinspection of the medical colleges; (*d*) hospital survey, and (*e*) the study of facilities for postgraduate education. In connection with the latter, it is the opinion of your committee that many more hospitals can, with advantage, and will, become teaching institutions.

Finally, the committee recommends the adoption of the report as a whole and urges that the Association lend every encouragement to the Council in the furtherance of its work.

Respectfully submitted,

J. H. J. UPHAM, Chairman,
J. R. PHELPS,
FRANKLIN E. MURPHY,
GEORGE DAVID STEWART.

After reading the report, Dr. Upham moved its adoption. Seconded and carried.

Report of Reference Committee on Legislation and Political Action

Dr. Thomas S. Cullen, Maryland, Chairman, presented the report of the Reference Committee on Legislation and Political Action as follows:

Your committee listened with the greatest interest to the "Report of the Social Insurance Committee," as given by our incoming president, Dr. Alexander Lambert. The House has not the slightest conception of the amount of work this committee has accomplished. To have read the report in full would have taken at least an hour and a half. We would respectfully recommend that every member of the Association read this report in full.

Dr. Lambert has already told the House of Delegates that the subject under consideration is a stupendous one, and that it must be considered from every angle. Our committee recommends that the report of the Social Insurance Committee be adopted in toto and that the thanks of the House be extended to Dr. Lambert and his committee for the tremendous work they have already done and are doing to solve this problem, which vitally interests every man, woman and child in the United States.

Our committee heartily commends Dr. Lambert's committee in their refraining to make any definite recommendations on the subject at this time.

Your committee would suggest a change in the By-Laws whereby the title of this Reference Committee on Legislation and Political Action be changed to Reference Committee on Legislation and Public Relations.

This change is deemed advisable at this time, as the term political action has in some quarters been thought to refer to politics. In the words of Confucius, "Avoid the very appearance of evil. Do not stoop to tie your shoes in your neighbor's melon patch."

THOMAS S. CULLEN, Chairman,
CLARENCE PIERSON,
CHARLES E. HUMISTON,

Dr. Cullen moved the adoption of the first part of the report. Seconded and carried.

The second paragraph of the report was read when Dr. E. Eliot Harris, New York, moved to amend by inserting the words "A special narcotic drug committee in conjunction with the Council on Health and Public Instruction shall be directed to study the entire narcotic drug situation."

The amendment was seconded and accepted.

It was moved that this part of the report as amended be adopted.

Seconded and carried.

Dr. Cullen read the third part of the report, and moved its adoption, and that the part referring to a change in the By-Laws be referred to the Reference Committee on Amendments to the Constitution and By-Laws.

Seconded and carried.

Report of Reference Committee on Amendments to Constitution and By-Laws

Dr. Floyd M. Crandall, New York, Chairman, read the report of the Reference Committee on Amendments to the Constitution and By-Laws, as follows:

Your committee respectfully reports as follows:

The Judicial Council in their report to the House of Delegates presented numerous amendments to the Constitution.

Your committee recommends that the amendments be laid over until the next annual meeting of the House of Delegates, as required by the By-Laws, and also recommends that the members of the House of Delegates be requested to study the changes proposed and send suggestions to the Secretary of the Judicial Council, to the end that after a year of deliberation, comprehensive and wise action may be taken in the changes proposed.

The Council on Scientific Assembly recommended that Section 12, Chapter XI, of the By-Laws be amended by striking out the word "thirty" and substituting the word "twenty-five."

The section will then read: The number of papers including addresses, on the program of any section shall not exceed twenty-five.

The committee recommends the adoption of this amendment.

The same Council also proposed an amendment to Section 1, Chapter XI, Item 13, of the By-Laws, by deleting the words: "13, Genito-Urinary Diseases" and substituting therefore the words "13, Urology."

The committee recommends the adoption of this amendment.

The Secretary in his report recommended amendment to the By-Laws, Section 5, Chapter IV, which reads: "Not more than three Honorary Fellows shall be elected in any one year" so that the section shall read "Not more than three Honorary Fellows shall be elected at any annual session; provided, however, that on recommendation of the Council on Scientific Assembly and by unanimous vote, the House may elect more than three Honorary Fellows."

The committee recommends the adoption of this amendment.

Dr. E. Eliot Harris of New York presented the following amendment.

To amend Chapter IV, Section 2, of the By-Laws by adding at the end of the section, "provided, however, when there is only one nominee for the office, a majority vote without ballot shall elect."

FLOYD M. CRANDALL, Chairman,
P. W. TOMLINSON,
JOSEPH M. AIKIN,
I. C. CHASE,
FRANCIS A. WINTER.

The report was considered section by section, and on several motions, which were duly seconded and carried, each section was adopted after which the report, as a whole, was adopted.

Dr. Floyd M. Crandall, New York, moved that the Secretary be empowered to arrange the amendments adopted so as to bring them into proper relation with one another and to make the Constitution and By-Laws consistent and to renumber any sections that may be necessary and prepare them for printing.

Seconded and carried.

Report of Reference Committee on Reports of Officers

Dr. Hugh T. Patrick, Illinois, Chairman, read the report of the Reference Committee on Reports of Officers, as follows:

To the House of Delegates:

Your Reference Committee on Reports of Officers begs to continue its report as follows:

First, with reference to the address of the Chairman of the House of Delegates, your committee recommends:

1. That the Council on Health and Public Instruction be instructed to make an earnest effort actively to cooperate with the National Educational Association in the matter of physical education and physical development of the children and youth of the Nation.

2. That the House of Delegates endorse the plan of an annual midwinter conference of the secretaries of the various sections of the Scientific Assembly.

3. That the House of Delegates endorse the plan of an annual midwinter conference of the secretaries of all the state societies with the officers of the American Medical Association, and that the Trustees and Secretary of the American Medical Association be requested to secure, if possible, the active cooperation of the state societies in this movement.

4. That the House of Delegates consider the wisdom of designating a time when it shall sit as a committee of the whole for the consideration of any subjects the delegates may wish to present, which subjects could not be presented in the regular routine procedures of the House.

This suggestion is made by your committee because in the past delegates have complained that they were unable to get before the House matters in which they were interested.

Second, with reference to the address of the President, your committee:

1. Would express the opinion that his first suggestion is covered by your committee's recommendation of a mid-winter conference of state secretaries; and his sound advice on hospital standardization has been covered by the decision of the House to create a Council or Bureau on Hospitals.

2. Earnestly recommends that the Council on Medical Education be instructed actively to interest itself in the subject of postgraduate medical education and to report at the next annual session the results of its investigations and such recommendations as it has been able to mature.

3. Recommends that the House make a formal endorsement of the work of the Council on Pharmacy and Chemistry and that the House endorse the suggestion of the President and that this Council make an effort to confer with and secure the cooperation of the reputable drug and pharmaceutical interests of the country.

4. Recommends that the Trustees be requested further to consider the feasibility of publishing a journal of surgery, and also a journal of health and medicine for lay readers, and that the House express itself as sympathetic to both ventures if the Trustees find them to be practicable.

5. Recommends that the House endorse the suggestion that each of the councils of the Association make an effort to get in touch with and coordinate their work with similar bodies or committees in the different states, with a view to mutual assistance and advantage.

Third, your committee recommends:

1. Commendation by the House of that portion of the report of the Judicial Council relating to old age and disability insurance for physicians.

2. That the Judicial Council be requested to continue its investigations of this subject and to present a plan for such insurance when it believes that a practicable one can be formulated.

Fourth, your committee recommends that the resolution presented by the House of Delegates of the Medical and Chirurgical Faculty of the State of Maryland relating to abbreviation of premedical education be referred to the Council on Medical Education.

Respectfully submitted,

HUGH T. PATRICK, Chairman,
ROCK SLEYSTER,
J. N. HALL,
EDGAR A. HINES,
J. E. LANE.

At this juncture, the Vice Speaker took the Chair.

The report was considered section by section. The three sections of the first division were read, and on three separate motions, which were duly seconded, were adopted.

Section 4 of the first division was read, and Dr. Patrick moved its adoption, which motion was seconded by Dr. C. E. Cantrell, Texas.

After discussion by Dr. Frederic E. Sondern, New York, Dr. John D. McLean, Pennsylvania; Dr. C. E. Cantrell, Texas, and Dr. E. Eliot Harris, New York, the motion to adopt this section was put and declared lost.

Sections 1, 2, 3, 4 and 5 of the second division of the report were read, and on five separate motions, which were duly seconded, were adopted.

Sections 1 and 2 of the third division were read, and on two separate motions, which were duly seconded, were adopted.

The fourth division of the report was read, and Dr. Patrick moved its adoption.

Seconded and carried.

Dr. C. E. Cantrell, Texas, then moved that the report of the committee as amended be adopted as a whole.

Seconded and carried.

Report of Reference Committee on Miscellaneous Business

Dr. Southgate Leigh, Virginia, presented the report of the Reference Committee on Miscellaneous Business and moved its adoption, which motion was duly seconded and carried.

The report is as follows:

The Reference Committee on Miscellaneous Business submit the following report: We are in hearty accord with the resolution introduced by Dr. H. M. Brown of Wisconsin, the purpose of which is the saving to the medical profession of the valuable works on medicine and surgery compiled by the Surgeon-General's Department, for the use of Army and Navy Surgeons, during the war, and which under existing conditions are likely to be destroyed. We therefore recommend that the Board of Trustees take such steps as are necessary to accomplish, if possible, this purpose.

SOUTHGATE LEIGH, Acting Chairman,
H. B. GIBBY, Secretary.

Dr. Hugh T. Patrick, Illinois, Chairman, stated that the Reference Committee on Reports of Officers had made no report on the Board of Trustees, which was referred to the committee. He moved that the report of the Board of Trustees be adopted and filed.

Seconded and carried.

Dr. A. N. Sinclair, Hawaii, moved that where the word "state" occurs in speaking of constituent associations, the words "state and territorial" be substituted. Motion seconded and referred to the Reference Committee on Amendments to the Constitution and By-Laws.

Dr. J. H. J. Upham, Ohio, presented the following resolution which was referred to the Reference Committee on Legislation and Political Action:

WHEREAS, There has been introduced in the Senate of the United States and referred to the Committee on the Judiciary, a Bill, S. 1258, "To prohibit experiments upon living dogs in the District of Columbia or in any of the Territorial or Insular Possessions of the United States, and providing a penalty for violation thereof," and,

WHEREAS, The passage of such a bill would seriously embarrass the scientific researches of the government in disease prevention and therapy, because of the fact that the dog is an essential laboratory animal in the prosecution of such researches, therefore be it

Resolved, That the American Medical Association vigorously protest against the passage of such legislation, which would be inimical to the proper conduct of essential and life saving researches of disease, and that a copy of this resolution be sent to the chairman of the Judiciary Committee of the Senate.

Dr. Frederic E. Sondern, New York, offered a resolution protesting against the repeal of the daylight saving act, which was referred to the Reference Committee on Hygiene and Public Health.

Dr. R. G. Stroud, Arizona, offered the following resolution, which was adopted unanimously by a rising vote:

To the members of the House of Delegates:

WHEREAS, The medical profession responded to the cause of the great war during the past two years and

WHEREAS, Many of our members who so responded have given their lives in this cause, be it

Resolved, That in the minutes of this body the following memorium be adopted:

IN MEMORIAM

To the soldiers of peace who have given their lives so nobly in the service of the great war. May their death be an everlasting memorial that the medical profession may strive to copy the wonderful spirit which called these men to the service of their country in time of need.

Dr. J. E. Lane, Connecticut, moved that if any business shall come from the sections between now and Thursday, the Secretary is empowered to refer the same to the proper Reference Committees for consideration and report to the House of Delegates on Thursday afternoon.

Seconded and carried.

Dr. C. Van Zwalenburg, California, presented the following resolution, which was referred to the Reference Committee on Medical Education:

WHEREAS, The practice of medicine involves such an enormous range of scientific study that many minds must of necessity cover different fields of it, and

WHEREAS, We recognize the difficulties involved in the time and expense needed to secure a degree to practice medicine under the present curriculum, and

WHEREAS, There is a popular demand for less highly trained physicians as evidenced by the multiplicity of faddists and quacks preying on the public, and

WHEREAS, Nine-tenths of the ailments for which a physician is called do not require the attention of an expert, now therefore be it

Resolved, 1. That the House of Delegates of the American Medical Association encourage the designation of the practice of general medicine or "family physician" as a distinct and dignified specialty.

2. That we ask the Council on Medical Education to consider the possibility of establishing a distinct curriculum leading to the degree for the practice of this specialty which shall materially shorten the course.

3. That we emphasize the need of specialization, consultation and reference of patients.

Dr. William C. Fisher, New York, Delegate from the Section on Stomatology, asked for a decision by the Chair as to whether the adoption of the resolution referring to the election of officers of the various sections took effect this year.

The Vice Speaker ruled that the amendment to the By-Laws which changed the time for the election of section officers takes effect this year.

On motion, the House of Delegates adjourned until Thursday afternoon, June 12.

Fourth Meeting—Thursday Afternoon, June 12

The House of Delegates met at 2 p. m. and was called to order by the Speaker.

Supplementary Report of Committee on Credentials

Dr. C. P. Meriwether, Arkansas, Chairman, presented a supplementary report of the Committee on Credentials, stating that there were two regularly elected delegates from the state of Pennsylvania, who were not present; that Dr. W. D. Martin as an accredited and duly elected alternate was present, and the Committee on Credentials moved that he be seated as a delegate from Pennsylvania. From New Mexico, both the delegate and alternate were not present; that Dr. D. D. Swearingin had credentials from Dr. Miller, the accredited delegate. The committee was unable to make a report regarding this matter and desired to leave it to the House of Delegates.

It was moved and seconded that Dr. Martin, from Pennsylvania, and Dr. Swearingin from New Mexico be seated as delegates.

Seconded and carried.

Dr. F. S. Simpson, the duly accredited delegate from the Section on Obstetrics, Gynecology and Abdominal Surgery, being absent, Dr. Reuben Peterson, Michigan, was selected by the section to take the place of Dr. Simpson. The Committee on Credentials recommended that Dr. Peterson be seated in the place of Dr. Simpson.

It was moved and seconded that the recommendation of the Committee on Credentials be concurred in.

Seconded and carried.

It was moved that the report of the Committee on Credentials be adopted.

Seconded and carried.

The Secretary called the roll, and 114 delegates responded.

At the conclusion of the roll call, Dr. C. P. Meriwether, Arkansas, Chairman, presented a supplementary report for the committee on Credentials, stating that there were three duly accredited delegates from Illinois, who were not present, and recommended that Dr. William Allen Pusey be seated as delegate.

Dr. Randolph Winslow, Maryland, moved that Dr. Pusey be seated. Seconded.

Dr. Arthur T. McCormack, Kentucky, made the point of order that the Constitution and By-Laws of the American Medical Association provided for a method by which delegates and alternates should be accredited; that there was no provision for such an appointment as this, and that therefore the motion of Dr. Winslow was out of order.

The Speaker sustained the point of order raised by Dr. McCormack.

The Secretary read the minutes of the previous meeting, which were approved.

Election of Officers

The next order of business being the election of officers, Dr. Floyd M. Crandall, New York, nominated Dr. Hubert Work, Pueblo, Colo, for President of the Association.

The SPEAKER: A nomination needs no second. The question of whether the Speaker of the House of Delegates is a member of the House or not has never been determined. That carries with it the question if whether or not the Speaker of the House is eligible to election for President of this Association. The question is a vital one and is likely to come up, after a president is selected, along down through the list of officers as to whether or not the Speaker of the House is qualified to cast a vote in case of a tie. That is a question I will not rule on. If it pertains to me personally, I would do it with my usual promptness, and all of you can understand what that ruling would be. This question should be determined. I will therefore ask the Vice Speaker to take the chair and request him to lay the question before the House of Delegates in its entirety and ask the members of the House to settle for all time the status of the Speaker of the House of Delegates, so far as his eligibility for office is concerned and his qualifications to decide tie votes and other incidental matters.

The Vice Speaker took the chair.

Dr. E. Eliot Harris, New York, spoke on the question of the eligibility of the Speaker of the House as a candidate for President of the Association, stating that he had read the Constitution and By-Laws very carefully, in addition to Roberts' Rule of Order, which, according to the By-Laws, governs the deliberations of this body, and he was unable to find that the Speaker of the House was a member of the House, and there was nothing either in the Constitution or By-Laws which prohibited the Speaker from being placed in nomination for President.

Dr. Floyd M. Crandall, New York, said he also had read very carefully the Constitution and By-Laws and there was nothing which prevented the Speaker of the House from being voted on for the presidency of the American Medical Association. Accordingly, Dr. Crandall moved that the Speaker of the House of Delegates be declared eligible to the office of president or to any other of the great offices.

Motion seconded by Dr. C. E. Cantrell, Texas.

The VICE SPEAKER: How shall this question be determined?

Dr. E. Eliot Harris, New York, moved that the question be determined by a rising vote.

Seconded and carried.

The VICE SPEAKER: The House of Delegates will now vote on the eligibility of the Speaker of this House to the office of president or for any other office.

A rising vote was then taken, with the result that sixty-nine delegates favored the eligibility of the speaker to the office of president or for any other office, and twenty were opposed.

The motion was declared carried.

Commandant Joseph R. Phelps, U. S. Navy, nominated Admiral William C. Braisted, of the U. S. Navy, for President of the Association.

The nomination was seconded by Dr. Randolph Winslow, Maryland; Dr. R. M. Funkhauser, Missouri; Dr. J. G. Brook, Michigan; Dr. John D. McLean, Pennsylvania, and Gen. F. A. Winter, of the U. S. Army.

DR. HUBERT WORK: Mr. Vice Speaker: All my friends knew all along that I was not even a tentative candidate for President of the Association at this time. I felt it was very important that this question I raised in the beginning should be settled, not because of this alone, but for the reasons I gave. I have not been at any time a tentative candidate for the presidency of this Association, and I am not now. Will you pardon me if I take the privilege of withdrawing my name as a candidate for President of this Association and second the nomination of Admiral Braisted. (Loud applause.)

Dr. E. Eliot Harris, New York, moved that nominations be closed.

Seconded and carried.

Dr. E. Eliot Harris, New York, moved that the House of Delegates cast its vote by rising.

Seconded and carried.

The House did so, and ADMIRAL BRAISTED was declared unanimously elected President of the Association.

The other officers elected are as follows:

First Vice President—DR. DAVID L. EDSALL, Boston.

Second Vice President—DR. EMERY MARVEL, Atlantic City, N. J.

Third Vice President—DR. EUGENE S. TALBOT, Chicago.

Fourth Vice President—DR. GEORGE H. KRESS, Los Angeles.

Secretary—DR. ALEXANDER R. CRAIG, Chicago.

Treasurer—DR. WILLIAM ALLEN PUSEY, Chicago.

Speaker of the House of Delegates—DR. HUBERT WORK, Pueblo, Colo.

Vice Speaker of the House of Delegates—DR. DWIGHT H. MURRAY, Syracuse, N. Y.

Trustees—DR. A. R. MITCHELL, Lincoln, Neb.; DR. OSCAR DOWLING, Shreveport, La.; DR. D. CHESTER BROWN, Danbury, Conn.

President Lambert nominated the following as members of standing committees, and the House of Delegates confirmed the nominations:

Judicial Council—DR. M. L. HARRIS, Chicago, and DR. I. C. CHASE, Fort Worth, Texas, to fill the unexpired term.

Council on Health and Public Instruction—DR. HAVEN EMERSON, New York, and DR. VICTOR C. VAUGHAN, Ann Arbor, Mich., to fill the unexpired term.

Council on Medical Education—DR. ISADORE DYER, New Orleans, and DR. ARTHUR DEAN BEVAN, Chicago, to fulfil the unexpired term.

Scientific Assembly—DR. J. D. BLAKE, Boston.

Supplementary Report of Council on Scientific Assembly

The Secretary presented a supplementary report from the Council on Scientific Assembly to which was attached the following list of delegates representing the medical professions of foreign countries and foreign guests:

The Council on Scientific Assembly recommends that this year at this VICTORY MEETING the House of Delegates shall elect to Honorary Fellowship those physicians who are in attendance at this annual session as delegates representing the medical profession of the several countries which were the allies of the United States in the prosecution of the world's war and also those other guests of the association from other foreign nations. The Council reports that several of the sections have nominated the foreign delegates and guests whose name appear on the appended list.

J. SHELTON HORSLEY,
GEORGE H. SIMMONS,
ALEXANDER R. CRAIG.

Gen. L. Melis, Delegate	Belgium
Col. Antoine Depage, Delegate	Belgium
Lieut.-Col. P. Nolf, Delegate	Belgium
Prof. Jules Duesberg, Delegate	Belgium

Capt. Vande Velde, Guest	Belgium
Dr. Réné Sand, Delegate	Belgium
Sir Arthur Newsholme, Guest	England
Major Ernest W. Hey Groves, Delegate	England
Sir St. Clair Thomson, Delegate	England
Lieut.-Col. Sir Shirley Murphy, Delegate	England
Sir Arbuthnot Lane, Delegate	England
Rear-Admiral Edgar R. Dimsey, Delegate	England
Dr. Frank Atcherley Rose, Delegate	England
Dr. Arthur F. Hurst, Delegate	England
Major Fernand LeMaitre, Delegate	France
Major Paul Bégouin, Delegate	France
Major Robert Picqué, Delegate	France
Major S. T. Lee, Delegate	China
Commander Chang Ting-han, Delegate	China
Dr. Asajiro Kamimura, Delegate	Japan
Dr. Senichi Uchino, Delegate	Japan
Dr. Ryuyo Kodama, Guest	Japan
Dr. Juan Guiteras, Delegate	Cuba
Dr. Emilio Martinez, Delegate	Cuba
Dr. Julio Carrera, Delegate	Cuba
Dr. Francisco Fernandez, Guest	Cuba
Dr. Peter F. Holst, Guest	Norway
Dr. Sven Ingvar, Guest	Sweden

Greece was represented by the following Fellows of the Association: Dr. John Constas and Dr. Alexander Alexion.

On motion, duly seconded and carried, the report was adopted.

Supplementary Report of the Judicial Council

Dr. M. L. Harris, Illinois, Chairman of the Judicial Council, submitted the following supplementary report from the Judicial Council:

There has been submitted to the Judicial Council the application for Associate Fellowship of the following physicians who are residents of Canada and who are each of them members of the chartered national medical societies of Canada and their respective provinces: Joseph Boulanger, Edmonton, Canada; L. Seale Holmes, London, Ontario, Canada, and W. O. Taylor, Cobalt, Ontario, Canada.

Each of these applications is approved by the Judicial Council.

M. L. HARRIS, Chairman,
H. A. BLACK,
RANDOLPH WINSLOW,
WILLIAM S. THAYER.

On motion, duly seconded and carried, the report was accepted.

Applications for Associate Fellowship

The Secretary then submitted applications for Associate Fellowship approved by the officers of the several sections.

On motion, duly seconded and carried, those nominated for Honorary Fellowship were elected, and the Secretary was instructed to officially inform all those recommended for Associate Fellowship who are not eligible for membership in the state or territorial association within whose jurisdiction they reside, and against whom no objection is filed by the officers of the constituent association having jurisdiction, that they are Associate Fellows of this Association.

Supplementary Report of Reference Committee on Legislation and Political Action

Dr. Thomas S. Cullen, Maryland, Chairman, presented the following supplementary report of the Reference Committee on Legislation and Political Action:

In regard to House Bill 5123 and Senate Bill 1189 to prevent transmission through the mails of advertisements relating to the treatment of venereal diseases and certain sexual disorders, your committee heartily recommends that the resolution asking that these bills be passed be acted on favorably by the House of Delegates.

Your committee recommends that the resolution of Dr. E. Eliot Harris, which is as follows:

Resolved, That the Council on Health and Public Instruction, in cooperation with the special committee on narcotic drugs constituted at this annual session of this House, be directed to study the entire narcotic drug situation, economic and medical, in the United States and report to the House of Delegates at the next meeting,

be adopted by this House.

In relation to the resolution offered by Dr. J. H. J. Upham, Ohio, on Senate Bill 1258 concerning animal experimentation, your committee recommends the adoption of this resolution by the House of Delegates, and that the matter be referred to the Council on Health and Public Instruction for appropriate action.

Your Committee received the following preambles and resolutions from the Section on Pharmacology and Therapeutics. Your Committee recommends that these also be referred to the Council on Health and Public Instructions:

PREAMBLES AND RESOLUTIONS PASSED BY THE SECTION ON PHARMACOLOGY AND THERAPEUTICS

WHEREAS, The medical procedures of the recent war which are in most cases the direct result of experimentation on animals have led to the saving of hundreds of thousands of our soldiers from sickness and death, and

WHEREAS, Further progress along these lines is menaced by a bill now before Congress known as No. S. 1258 prohibiting the use of dogs for experimental purposes, be it

Resolved, That it is the sense of the Section of Pharmacology and Therapeutics of the American Medical Association that this proposed legislation is unwise, that it is a detriment to the progress of medicine and surgery, and that it imperils the health and lives of the citizens of the United States; and be it further

Resolved, That the Section on Pharmacology and Therapeutics of this association urges on the Congress that this bill should not become a law.

Your committee has carefully considered the resolution adopted by the House of Delegates of the Medical Society of the State of New York which resolution is as follows:

Resolved, That the delegates of the Medical Society of the State of New York to the American Medical Association be and are hereby instructed to introduce a resolution in the House of Delegates of the American Medical Association opposing the scheme of compulsory health insurance and to support it in every way possible.

At the meeting of the House of Delegates of the American Medical Association held on Tuesday last, your committee commented on the splendid work the Committee on Social Insurance had done and recommended that they be thanked for the tremendous amount of work they had already accomplished and further recommended that they be commended for having made no special recommendations at this time. We further advised that the report of the committee be adopted in toto. This the House of Delegates adopted unanimously.

To comply with the resolution from the state of New York would be an attempt to settle the subject when the evidence for and against is far from complete. Any further action of this body at this time would be a reversal of the action unanimously taken on Tuesday. We recommend that this resolution be tabled.

CLARENCE PIERSON,
C. W. STAHL,
CHARLES E. HUMISTON,
THOMAS S. CULLEN, Chairman.

The report was considered section by section, and on several motions, duly seconded and carried, the report was adopted.

Dr. J. W. Schereschewsky, District of Columbia, moved that the report be adopted as a whole.

Seconded and carried.

Supplementary Report of Reference Committee on Sections and Section Work

Dr. George D. Head, Minnesota, Chairman, presented a supplementary report of the Reference Committee on Sections and Section Work.

The report follows:

No Fellow shall contribute or read before his section or any section of this Association more than one paper in two successive years, except by special invitation adopted by a formal vote of the section.

Submitted for the Reference Committee.

GEORGE D. HEAD, Chairman.

Continuing, the chairman of this reference committee stated that in accordance with the understanding of the reference committee the recommendation submitted involved a change in the By-Laws or in the standing rules, and consequently it should lie over until the 1920 annual session. He therefore moved that the report be received in order that it shall be submitted to the House of Delegates at the next annual session for action.

Dr. Arthur T. McCormack, Kentucky, arose to a question of parliamentary inquiry and asked the Speaker to rule on whether or not this recommendation of the Reference Committee might not be adopted at this meeting as a standing rule of the association.

The Speaker ruled that the suggested procedure would be in order.

Thereupon Dr. McCormack moved to amend the recommendation of the reference committee by substituting the following:

Resolved, That the House of Delegates shall establish a standing rule to the effect that no Fellow shall contribute or read before his section or any section of this association more than one paper in two successive years except by special invitation adopted by a formal vote of the section.

Dr. Head, Chairman of the Reference Committee, and mover of the motion, together with the seconder, accepted Dr. McCormack's amendment.

After discussion by Dr. Hugh T. Patrick, Illinois; Dr. M. L. Harris, Illinois, and Dr. J. B. Blake, Massachusetts, Dr. Harris moved that the resolution be laid on the table.

Seconded and carried.

Report of Reference Committee on Rules and Order of Business

Dr. Joseph Rilus Eastman, Indiana, Chairman of the Reference Committee on Rules and Order of Business, presented the following report:

The Reference Committee on Rules and Order of Business recommends for adoption the resolution offered by Dr. M. L. Harris of Illinois, as follows:

Resolved, That the Secretary be instructed to have published in the handbook as an addendum all resolutions that express an opinion or policy of the Association that have been adopted by the House of Delegates during the past five years, and that this addendum be added to from year to year as new resolutions are adopted so that the members of the House may know what opinion and policies have been approved by this body, with the suggestion that the period embraced in the review be lengthened from five to ten years.

J. RILUS EASTMAN, Chairman,
G. WYTHE COOK,
JOSEPH R. MORRELL,
F. LEM. HUPP.

Dr. C. E. Cantrell, Texas, moved that the report be adopted as read. Seconded.

After discussion by Dr. V. G. Vecki, California; Dr. E. Eliot Harris, New York; Dr. C. E. Cantrell, Texas, and Dr. R. G. Stroud, Arizona, the motion to adopt was put and carried.

Report of Reference Committee on Hygiene and Public Health

Dr. J. W. Schereschewsky, United States Public Health Service, Chairman, presented the report of the Reference Committee on Hygiene and Public Health, and moved its adoption.

The report is as follows:

Referring to the proposed repeal by Congress of the Daylight Saving Act, your committee begs to submit the following report in relation thereto:

The national experience with the Daylight Saving Act during the past two years has shown in the opinion of the committee that the action of this bill has been wholly beneficial, not only as it added to the total of national health by lengthened hours of recreation in the open air, but it is the belief of the committee that notable economic savings have been made in the use of fuel, thereby materially assisting the conservation of national resourses, which still is and always will be essential. Your committee therefore begs to report the following resolution with the recommendation that it be adopted by the House of Delegates, and that copies of this resolution be sent, respectively, to the Speaker of the House of Representatives and the President of the Senate. Resolved that:

WHEREAS, The two years experience of the medical profession with the Daylight Saving Act has shown that this act has added materially to the sum total of national health and vigor by the increased recreational opportunities and encouragement of outdoor pursuits which it has afforded, and

WHEREAS, Through the operation of this act, material savings have been effected in the use of fuel, and

WHEREAS, Continued conservation of national resources still are and always will be essential to the prosperity of the nation, therefore be it

Resolved, That the House of Delegates of the American Medical Association vigorously protest against the repeal of the Daylight Savings Act, and that the Secretary of the Association be instructed to send copies of this resolution to the Speaker of the House of Representatives and the President of the Senate of the United States.

J. W. SCHERESCHEWSKY, Chairman.
H. A. ROYSTER,
C. D. SELBY,
V. G. VECKI.

Dr. Arthur J. Bedell, New York, presented a resolution passed by the Section on Ophthalmology on the daylight saving law, and moved to amend, which motion was seconded, that copies of the report just presented be sent to each senator and representative and also to the Speaker of the House of Representatives.

The amendment was accepted, and the original motion as amended was put to a vote and carried.

Supplementary Report of Reference Committee on Amendments to the Constitution and By-Laws

Dr. Floyd M. Crandall, New York, Chairman, presented a supplementary report from the Reference Committee on Amendments to the Constitution and By-Laws, as follows:

1. In reference to changing the name of the Reference Committee on Legislation and Political Action to Legislation and Public Relations, your committee recommends its adoption.

2. Regarding the resolution introduced by Dr. A. N. Sinclair, Hawaii, substituting the words "state and territorial" wherever the word "state" occurs, the committee recommends that wherever practical, when constituent associations are spoken of in correspondence or in articles, the fact that these constituent asssociations are both state and territorial shall be recognized.

3. The following resolution was adopted at a business session of the Section on Dermatology and referred to your Reference Committee:

Resolved, That the House of Delegates of the American Medical Association be petitioned to amend the title of the Section on Dermatology by adding to its present title the words "and Syphilis."

The committee recommends that this section be amended as set forth in the resolution, and that the amendment lie over until next year.

Submitted for the Reference Committee.

FLOYD M. CRANDALL, Chairman.

The report was considered section by section, and on three separate motions, duly seconded and carried, the report was adopted.

Supplementary Report of Reference Committee on Reports of Officers

Dr. Hugh T. Patrick, Illinois, Chairman, presented a supplementary report from the Reference Committee on Reports of Officers, as follows:

To the House of Delegates: Your Committee on Reports of Officers begs to report further as follows:

Concerning the report of the Secretary it recommends:

1. That the House of Delegates earnestly request national, state and county medical organizations to assume responsibility to returning discharged officers of the United States Army and Navy and urge these organizations to assist in every possible way such officers to reestablish themselves in civil life.

2. That the House of Delegates refer that part of the Secretary's report relating to a special authorized designation for Fellows of the Scientific Assembly to the Council on Scientific Assembly, with power to act.

Submitted for the Reference Committee.

HUGH T. PATRICK, Chairman.

At the conclusion of the report, Dr. Patrick moved its adoption, which motion was duly seconded and carried.

Supplementary Report of Reference Committee on Medical Education

Dr. J. H. J. Upham, Ohio, Chairman, presented a supplementary report from the Reference Committee on Medical Education, and moved its adoption, which motion was duly seconded and carried.

The report is as follows:

The Reference Committee on Medical Education has carefully reviewed the resolution presented by C. Van Zwalenburg concerning the designation of general practitioners as specialists, and the resolution presented by Dr. R. Winslow concerning the rearrangement of premedical education, and recommends the referring of both resolutions to the Council on Medical Education.

Respectfully submitted for the Reference Committee.

J. H. J. UPHAM, Chairman.

Supplementary Report of Board of Trustees

Dr. Thomas McDavitt, Minnesota, Chairman of the Board of Trustees, presented a supplementary report from the Board of Trustees, as follows:

The Board of Trustees took up the question of the next place of meeting several months ago and investigated the facilities which were available for the holding of an annual session of the Association in a number of the larger cities. The result of this investigation prompts the Board of Trustees to recommend that the 1920 annual session shall be held in New Orleans, La.

The board further recommends that the time for holding the annual session shall be referred to the board for its action. The board is of the opinion that the time for the next annual session should be in the latter part of April or the early part of May.

THOMAS MCDAVITT, Chairman.

Dr. C. E. Cantrell, Texas, moved the adoption of the report. Seconded and carried.

An American Hospital and Postgraduate School of Medicine in London

The Speaker asked the House of Delegates whether it would receive a communication which had been submitted because it relates to a measure in which one of the delegates representing the medical profession of Great Britain is personally greatly interested. There being no objection, the following communication was read.

It is with deep interest and gratification that the members of the American Medical Association learn of the project to establish and maintain in the city of London, England, an American hospital and postgraduate school, the school for physicians of America who desire to take advantage of the wealth of clinical material which London affords, and the hospital in part for American citizens who may become ill while abroad.

The institution is to be built by American residents of London. The project which originated with Mr. Franklin, an American surgeon who is attached to the Middlesex Hospital in London, is largely in the hands of Mr. Newton Crane of the American Embassy, and of Mr. Van Duzer, who guarantee that ample funds will be provided for the purpose. The sum of £1,000,000 has been suggested.

Lord Reading has been elected president, and has suggested a lay committee comprising all of the most prominent men in England. A corresponding list of prominent Americans is being selected. Hon. William H. Taft, Ex-President of the United States, has been approached in reference to his acceptance of the presidency on this side of the ocean.

The medical contingent of the British committee consists of Sir Humphrey Robertson, Sir William Osler, Sir John Bland Sutton and Sir Arbuthnot Lane.

It is proposed that the plan comprise three integral parts:

1. A private home or hospital for Americans abroad.

2. A nonpaying clinical portion of from 100 to 200 beds.

3. The major portion of the building to consist of a home for the American Medical Association. This will comprise lecture room, theater, library, laboratories, and all necessary equipment, and facilities for postgraduate study and research. The clinical and other materials which Great Britain affords for substudy and research will be at the disposal of American physicians who attend the school.

Among the objects of the plan are the development of friendly competition in research in the field of the medical sciences, and the welding of the two English-speaking nations into one body.

It is learned that it is the desire of the men in England that the American Medical Association should formulate concrete ideas for the development of this project, and that the Association cooperate with the British Committee in bringing about its consummation.

Be it therefore,

Resolved, That this matter be referred to the Council on Medical Education with instructions to report to the Board of Trustees some plan of effective cooperation of the American Medical Association with the British committee in charge of the American postgraduate medical school and hospital of London.

On motion, duly seconded and carried, the foregoing communication was referred to the Council on Medical Education.

Special Committee on Narcotic Drugs Appointed

The Speaker appointed as a special committee called for in a resolution offered at a previous meeting of the House on the question of narcotics, Dr. E. Eliot Harris, New York, Chairman; Dr. A. T. McCormack, Kentucky; Dr. Paul Waterman, Connecticut, and Dr. Alexander Lambert as member, ex officio.

Unfinished Business

Under the head "unfinished business," Dr. Reuben Peterson, Michigan, presented the following resolution, which was passed by the Section on Obstetrics, Gynecology and Abdominal Surgery:

WHEREAS, An effort is being made to organize an International Congress of Obstetricians and Gynecologists at a meeting in Brussels during September next, at which American obstetricians and gynecologists will have representation, therefore, be it

Resolved, That the Section on Obstetrics, Gynecology and Abdominal Surgery of the American Medical Association unanimously approves of this movement, stands ready to cooperate in every way, and cordially invites the Congress to hold its initial meeting in New York at a convenient date to be determined.

Dr. H. M. Brown, Wisconsin, moved that this resolution be received and referred to the Council on Scientific Assembly.

Seconded and carried.

Dr. William Van Valzah Hayes, New York, delegate from the Section on Gastro-Enterology and Proctology, presented the following resolution, which was referred to the Council on Medical Education:

WHEREAS, Medical officers who served overseas state that many soldiers among the American Expeditionary Forces suffered from diseased conditions of the rectum, requiring operation in the war zone, which should have been recognized by proper examination at some time before their embarkation, and

WHEREAS, Increased strain on transportation and hospitalization were induced thereby; be it

Resolved, That in order to improve the effectiveness of preparedness for possible future emergencies we recommend that suitable instruction in modern methods of rectal examination be given to student medical officers, being trained for Army and Navy service, and to this end instruct our secretary to send a copy of this resolution and recommendation to the Surgeon-General of the Army and to the Surgeon-General of the Navy, for their consideration.

Dr. Arthur T. McCormack, Kentucky, requested unanimous consent to introduce a motion to reconsider the action taken in adopting the report of the Reference Committee on Reports of Officers, which action was taken at the last meeting of the House.

He stated that his purpose in asking for the consideration of a motion to reconsider, is that an amendment may be made to the report by adding a recommendation that in the execution of the laws and regulations pertaining to child welfare and child education, the House shall recommend that these executive functions be exercised, when they are within the scope of the federal government, by the United States Public Health Service, and all questions falling within the jurisdiction of the states shall be exercised by the respective state departments or boards of health. Unanimous consent having been granted, Dr. McCormack introduced a motion to amend the report as stated above and to adopt the amended report, which was seconded.

After discussion by Dr. M. L. Harris, Illinois; Dr. J. W. Schereschewsky, District of Columbia, and Dr. Isaac A. Abt, Illinois, the report, as amended, was adopted.

Dr. E. Eliot Harris, New York, asked unanimous consent, which was granted, to bring a matter before the House, and requested the Vice Speaker to take the Chair.

The Vice Speaker took the Chair.

Dr. Harris then moved that the House of Delegates express its appreciation and good will to the Speaker by a rising vote.

Motion seconded and unanimously carried.

Dr. Arthur T. McCormack, Kentucky, moved that a rising vote of thanks be extended to the members of the Local Committee of Arrangements and to others who have contributed to the success of this VICTORY MEETING.

Seconded and carried.

As there was no further business to come before the meeting, the Speaker declared the House of Delegates adjourned sine die.

THE SCIENTIFIC ASSEMBLY

THE OPENING GENERAL MEETING

Tuesday Evening, June 10

The opening meeting of the Association was held in the Music Hall of the Steel Pier, and was called to order at 8:30 p. m. by the President, Dr. Arthur Dean Bevan, Chicago.

Music was rendered by the Philadelphia Navy Yard Band of twenty-three pieces.

A number of past presidents of the Association, members of the Board of Trustees, and foreign guests occupied seats on the stage.

Prayer was offered by Abner H. Lucas, Ph.D., D.D., Atlantic City.

President Bevan introduced Dr. Emery Marvel, Chairman of the Local Committee of Arrangements, who called attention to the list of entertainments provided for the members and guests.

Addresses of Welcome

Hon. Harry Bacharach, Mayor of Atlantic City, was introduced, and delivered the following address of welcome:

ADDRESS OF WELCOME BY MAYOR OF ATLANTIC CITY

Mr. President, Ladies and Gentlemen, and Distinguished Guests from Foreign Lands: I am sure you all know that it is a mere matter of form for me to welcome you to this great playground of ours and to this great convention city of America, because every one in this country surely must know that the American Medical Association is welcome, not only to Atlantic City but to any city in this great country of ours. The men and women of your profession, who so unselfishly and loyally performed their work not only in this country but also on foreign shores, and who, when the great epidemic of influenza struck this country, cared not for finances or even their own health, deserve great credit, because they were willing to sacrifice all that lives might be saved.

We, in Atlantic City, are proud of many things. We are proud of our magnificent boardwalk, five miles long and 100 feet wide, where half a million people promenade at one time, where you never see any one acting in an unbecoming manner, where women unaccompanied are not molested by any one. We are proud of our magnificent force of ninety life guards, who protect the lives of more than 5,000,000 people that bathe here in the summer season, without a single loss of life by drowning.

We are proud of our magnificent streets, which are better lighted, better paved and cleaner, we believe, than any other city in the United States. We are proud of our magnificent hotels, in which we feel you can get more for your money than in any other hotels in the country, where a person of the humblest means can come and enjoy himself along with the rich. But above all, my friends, in this great playground of ours, there has not been a call of our county for any loan or any drive in which Atlantic City failed to go over the top. From this city, more than 3,500 of the best young manhood responded to our country's call. (Applause.) When the war first broke out, we did not wait for Congress to act, but we organized a Liberty Club, so that everybody in this city from the humblest walks in life to the proprietors of our magnificent hotels became members. We took care of the dependents of our soldiers and sailors in a fitting manner. (Applause.)

While in this city we want all of you to make yourselves at home, and particularly our foreign guests. We want in this country nothing but 100 per cent. American citizens. We believe that the Bolshevik or any of his type who is not satisfied to fight and even die, if necessary, for Old Glory, should go back to the country from which he came, and not stay in this great and glorious country of ours. (Applause.)

This war has taught us one important thing: that there is no North, there is no South, there is no East nor West.

In behalf of the citizens of Atlantic City, I desire to present to you and through you, Mr. President, to this convention, our best wishes that your stay here will be a pleasant one; that it will be profitable and beneficial, not only to your profession but to the United States and to the world at large. So on behalf of its citizens, I want to present to you, not only the key to Atlantic City, but the key to the hearts of the people of this city. [Here the mayor handed the key to President Bevan.] (Applause.)

President Bevan said: In the name of the Association, we accept this welcome. If any of you lose your night key and this meeting adjourns very late, I will lend you this key, which will unlock any one of the thousand hotels in Atlantic City. I am now going to call on the president of the oldest state medical society in the Union. It is more than 150 years old. I take great pleasure in introducing to you Dr. Thomas Harvey, President of the Medical Society of the State of New Jersey.

ADDRESS OF WELCOME BY DR. HARVEY, PRESIDENT OF MEDICAL SOCIETY OF THE STATE OF NEW JERSEY

Mr. President, Fellows and Guests of the American Medical Association, Ladies and Gentlemen: It is my pleasant duty to represent the Medical Society of the State of New Jersey in welcoming the members of the American Medical Association to the shores of our compact little state; a welcome that is universal. From the wooded dells of Sussex to the shining sands of Cape May, nowhere in the world is there a convention city so well suited to your purpose; for whether you come for scientific instruction, or the improvement of your health, or just for the happiness of your souls, it is most fitting that our state society should join in this welcome, because, as has been said by President Bevan, we are the oldest medical society in the Union, and have a sort of grandmotherly interest in all societies, especially this, which is reaching its seventieth birthday. Moreover, this year, of all years, we should gather here at this Atlantic seashore and recall the fact that one year ago this shore was in the war zone and exposed to bombardment, and that now we have reached the piping times of peace when our minds are free from the horrors of impending invasion.

We also welcome the great army of medical men, over 35,000 strong, who sacrificed all that life might be made worth while and laid on the altar of their country their wealth of experience and knowledge, the result of many years of hard work, their love of home and family, their hopes for the future, and even life itself, that our army and navy should

have everything that modern science has to offer for safeguarding and rehabilitation.

We also welcome the other great army of medical men who were compelled to remain at home, who gave much thought and labor and time to the work of selected service in the preliminary examination of our soldiers. There was no more wonderful demonstration of the prompt efficiency of our people in the whole course of the war.

We also welcome the medical men of our allies, who bore the burdens of the day, meeting the new problems in war time surgery, with such wonderful skill and devotion, so that when at last we entered the war, we found that the principles underlying the work had been so thoroughly worked out that our men had only to study and apply details.

We welcome also that devoted band of American physicians who from the outbreak of the war in 1914 rushed over to the assistance of their European brothers and aided much, as we know, in establishing the surgical treatment of wounds on a sound foundation.

We also welcome here those noble souls who, in the trenches and in No Man's Land, offered up the supreme sacrifice; and this spirit we feel sure is here in attendance at this VICTORY MEETING, watching to see if we are faithful to our trust and to carry on as they did in our divinely appointed office, carrying succor to those afflicted with disease.

We certainly can take great pride in the work that the doctors have done in this world war and in the great reduction of permanent casualties that they have effected.

We in New Jersey are also pround of the fact that one third of the membership of our state society volunteered in the service.

Our duty of the future is to enlarge and strengthen our organization in all its ramifications, so that we may be prepared for the tremendous social changes that are threatening the peace of all classes of society. If the doctors are to keep medicine as one of the liberal professions, we must antagonize all efforts to reduce it to a trade. But if it is to be a trade, we must organize as efficient a union as possible and use union methods for our protection. (Applause.)

President Bevan said: I regret exceedingly that I have to announce that the Honorable Walter E. Edge, governor of New Jersey, United States senator-elect, has been unavoidably detained and will not be here with us tonight.

REMARKS BY PRESIDENT BEVAN IN INTRODUCING SURGEON-GENERAL IRELAND

One year ago the American Medical Association held a great war meeting. It was a call to the medical profession to organize for war. We asked for the necessary medical officers for an army of 5,000,000 men or more and for a navy of a million men if it was needed. The call was answered promptly and magnificently by the organized medical profession of the country. Within six months from that time 50,000 medical men and women had offered their services to the government, and almost 40,000 had been accepted and received their commission. At that meeting few of us dreamed, none of us dared to hope, that within six months the brutal military power that had forced us into war would be broken and would be humbly suing for peace. (Applause.)

The war was won when America threw the weight of its unlimited resources and its hundred million people into the scales on the side of humanity. The war was won by the hundreds of thousands of men who volunteered and by the 23,000,000 who gladly and without protest answered the call of the draft to the colors. The war was won not by the professional military establishment but by the men who were called from civil life into military service and were rapidly trained and organized into a great and efficient military machine. When the war began, the medical department of the army consisted of less than 500 medical officers. When the war ended, the medical department consisted of 34,000 medical officers and 250,000 men and women. (Applause.) Ninety-eight per cent. of the personnel of the medical department were called from civil life. The small regular medical department furnished the leaven, but the great mass came from the civilian population. Ninety-eight per cent. of the work of the medical department was done by the civilian physicians and the Red Cross nurses and the boys from all walks of life who volunteered or were drafted into the medical service.

The war has been won, and we are assembled here at a great victory meeting of the organized medical profession of the country. We are here to pay tribute to the medical men and women who served their country in this war. We are here to pay a tribute to the men and women who died in the service of their country. In sorrow, and in gratitude that they served their country and humanity so well, we place a wreath of flowers on their grave.

We are here to pay tribute to the men and women who served and whose health was shattered in the service. We owe them a great debt—a debt that should be paid as far as it can be paid by a grateful country and a grateful profession.

We are here to pay a tribute to the men and women who are returning strong and well from military service abroad and the cantonments in this country, back to their homes and their civilian practice. We join with their families who with tears of joy have welcomed them home. They sacrificed much, but they come back to us broadened and strengthened. Their services have earned for them special recognition and the support from the communities in which they live and their colleagues. (Applause.)

We are here to pay a tribute to the regular medical officers of the army and navy for the efficient services which they rendered in training the thousands of medical men coming from civil life in the work of the military surgeon.

We are here to pay a tribute to Surgeon-General Gorgas (applause), to Surgeon-General Ireland, and to Surgeon-General Braisted for their able leadership. (Applause.) We are here to pay a tribute to the great teachers of medicine and surgery and hygiene and the medical and surgical specialties who at once volunteered and gave the government and the troops the benefit of their special knowledge and expert advice.

We are here to pay the greatest tribute to the rank and file of the medical men who served where they were placed without special rank or special distinction, for the work of these men outweighs and overshadows all the rest. (Applause.)

We are here to pay tribute to the 30,000 medical men who served on the draft boards and advisory boards. These men rendered valuable services to their country.

The war has been won. The great military force in khaki and in blue is fast fading back into civil life. The medical profession of the country can well be proud of the great part which it has played. To realize the magnitude of our effort it is but necessary to state that within a short time we developed a greater medical service than that of England, France, Belgium, Canada and Australia combined. (Applause.) Our best men entered the service. Our soldiers and sailors were given the best of medical care and surgical skill. In such an enormous task of creating within a short time a great and efficient medical service, there was necessarily some confusion, some friction, some oversights, some mistakes; but when one looks at the sum total of the accomplishment of the medical profession of America in this war, we are proud of both our profession and our country. (Applause.)

This meeting of the American Medical Association is a great victory meeting, and we have invited to it members of the medical professions of the countries which were our allies in the winning of the war, and which are now our allies in the peace we hope will make the world safe for democracy. We welcome them to America. We welcome them to this meeting of the American Medical Association. We extend to them our hand in friendship and in the fellowship of science.

These men come as the guests of the American Medical Association. They have served in the military service of their own countries. It is, therefore, eminently fitting and proper that they should be welcomed here by a representative of the medical services of our government. It is my great privilege, as President of the Association, to ask one who served his country with distinguished ability both on

the battlefields of France and in organizing the medical department at Washington, to welcome our guests and introduce them to you. I have the honor to introduce Surgeon-General Ireland. (Applause.)

ROSTER OF INVITED GUESTS

Surgeon-General Ireland called the roster of invited foreign guests, and as the name of each was called, the introduction was acknowledged.

England was represented by Lieut.-Col. Sir Shirley Murphy, Sir William Arbuthnot Lane, Sir St. Clair Thomson, Sir Arthur Newsholme, Rear Admiral Edgar R. Dimsey, Dr. Ernest W. Hey Groves, Dr. Frank Atcherley Rose, Dr. Arthur F. Hurst and Mrs. Eleanor Barton.

France was represented by Major Fernand Lemaitre, Dr. P. Bégouin, Dr. Robert Picqué, Dr. Maurice Heitz-Boyer, and Dr. C. Mullon.

Belgium was represented by Gen. L. Melis, Col. Antoine Depage, Lieut.-Col. P. Nolf, Professor Duesberg, Captain Van de Velde and Dr. Réné Sands.

Greece was represented by Drs. John Constas, G. Gavaris, Constantine Caroussos and Alexander Alexion.

Japan was represented by Drs. Asajiro Kamimura, Senichi Uchino and Ryuzo Kodama.

China was represented by Drs. S. T. Lee, William Wesley Peter, Chang Ting-Han and Hsu Ming-Shoo.

India was represented by Belle J. Allen.

Cuba was represented by Drs. Juan Guiteras, Emilio Martinez, Julio Carrera and Francisco M. Fernandez.

Argentine was represented by Dr. Pedro Chutro.

Ecuador was represented by Dr. E. L. Kingman.

Peru was represented by Dr. Alejandro Acha.

Norway was represented by Dr. Peter F. Holst.

Sweden was represented by Dr. Israel Holmgren and Sven Ingvar.

ADDRESS OF SURGEON-GENERAL IRELAND

After introducing the foreign guests, Surgeon-General Ireland said:

Ladies and Gentlemen: Two years ago this evening an advanced party of the American Expeditionary Forces landed in France. From that day they received every possible assistance and courtesy from the medical departments of the allied armies. They had been in this war three years before we joined and had learned many things which we knew nothing about and could only learn by practical experience. The war, as you know, was carried on in the trenches, and this produced new elements in caring for the wounded and taking care of the sick. New methods had been developed in caring for the wounded at the casualty clearing stations and base hospitals. Great advances had been made in war surgery, which our surgeons were not familiar with. New methods had been developed of evacuating a great number of the sick and wounded to the base and home port medical departments of the allied armies Through the surgeons in Great Britain at their front area, we were made familiar with the new forms of warfare in the trenches, where our surgeons learned new lessons in war surgery and were made familiar with the underlying principles in the care of the wounded and in many modern ways of evacuating them to the base hospitals

We went to France when that country was greatly exhausted in man power and material, by months of cruel war. The problem of hospitalization to take care of the thousands of sick and wounded that were there was a tremendous one. We received the most cordial support from the medical departments of the allied armies in meeting this problem. They gave us many hospitals, which amounted to thousands of beds and assisted us in locating other hospitals. Not content with this, their surgeons came in great numbers to Paris for the purpose of attending the meetings of the Research Society, and they gave us freely of their newly acquired knowledge. In these ways and in many others, too numerous to mention, our associates in Europe assisted us with that sympathy and teamwork which should always characterize the medical profession.

Gentlemen, delegates and guests, it is a great pleasure to welcome you to this VICTORY MEETING of the American Medical Association, and a privilege, a rare privilege, to present you, as invited guests, to its members. (Applause.)

President Bevan said: My next duty is one that is very pleasing to me. The American Medical Association at its last meeting honored a man by electing him to the presidency of the Association; a man who stands for the best in American medicine. They honored him because he had done such splendid work in the organization itself. He had devoted years of his time and energy to elevating the standards of our professional work by putting his shoulder to the wheel in the machinery of the American Medical Association, and had accomplished a great deal of good. They honored him because he was one of the first men to answer the call and don the khaki-colored uniform of the medical department. The American Medical Association has honored many great and worthy men by electing them to the presidency of the Association. It has, however, never bestowed this honor more worthily on a man who deserves it more and who will fill the office with greater efficiency than Alexander Lambert, and I have the great pleasure of introducing him to you. (Applause.)

ADDRESS OF THE PRESIDENT, ALEXANDER LAMBERT

Before delivering his address as President of the American Medical Association, Dr. Lambert said:

Mr. President, Invited Foreign Guests, Ladies and Gentlemen: It is with keen pleasure that I desire to make my first official act as president of this Association an act of welcome to the members of the allied army, whom I had learned to know abroad, and I am indeed happy to be the one that thrice welcomes them here, and to add my welcome to the others that have already been extended.

It means new friendships and a new fellowship in medicine; it means the cementing of the fellowship and friendship that we found abroad when we went as strangers to a foreign land. It means more than any words can express, and the welcome that I bid you, gentlemen, is one which in its heartiness and in its sincerity is very deep indeed. It represents the friendship of the American Medical Association; it represents in turn the comity of the American Medical Association in the fellowship of medicine of its friends abroad. Thrice welcome are you, and welcome indeed. (Applause.)

President Lambert then delivered his address, which was published in THE JOURNAL, June 14, 1919, p. 1713.

THE VICTORY MEETING

Wednesday Evening, June 11

The VICTORY MEETING of the Association was held, June 11, with the President, Dr. Alexander Lambert, in the chair.

GENERAL F. A. WINTER, representing the U. S. Army, stated that during the war many able, large-minded, energetic and capable men had given up the possibilities of large lucrative practices to serve with the army, while others had adopted it as a life-time calling. Before the present war, but few knew anything about the medical conditions of the army. Now, with the backing and support that were formerly lacking, great improvement has resulted. The whole medical corps, supported by the American Medical Association and kindred organizations, deserves great credit for what has been accomplished.

COMMANDANT JAMES R. PHELPS, representing the U. S. Navy, said that the death rate of the navy for the first year of the war was lower than for the previous year of peace, and that the death rate for disease of the entire navy for the whole period of the war was so low that it reflected great credit on the medical profession of the United States and the medical corps of the navy, as well as on the Surgeon-General because of his able leadership. The death rate for the whole period of the war was 8.8, the lowest death rate that has ever been reached by the naval or military service of the United States at war.

DR. C. C. PIERCE, representing the U. S. Public Health Service, referred to the various activities of this service during the war and of how military needs caused a great increase in the manufacture of biologic remedies, such as serums, antitoxins and vaccines, all of which had to be tested and their standardization supervised by the hygienic laboratory of the service. One of the great pieces of work done by the United States Public Health Service was the creation of sanitary zones in the areas immediately surrounding the various cantonments.

DR. LIVINGSTON FARRAND, representing the American Red Cross, referred to its activities and achievements. From observations made during the first nine months after the United States entered the war and before our army had reached France, the Red Cross was a most powerful agency in upholding the morale of the French people, which was at a low ebb in the spring of 1917. The American Red Cross was likewise a powerful agency in winning the war. He paid an eloquent tribute to the women of America for having quickly prepared 300,000,000 surgical dressings. Everything was done by them that was called for.

COL. HENRY B. BIRMINGHAM, representing the Association of Military Surgeons, stated that the membership of this association was now nearly 9,000, and as a result of the recent war he expressed the hope that the membership of this organization would be materially increased.

DR. LEE K. FRANKEL, representing the American Public Health Association, spoke of the activities of this body, what it had accomplished, and what it hoped to do in the future with reference to preventive medicine.

DR. DAVID R. LYMAN, representing the National Association of Tuberculosis, stated that the recent war made us realize the extent to which chronic diseases, tuberculosis, venereal diseases, etc., weighed on us and impeded progress. There were 61,964 men rejected on account of tuberculosis by the draft boards throughout the United States. His message to the people was that we must have universal military service, primarily, as the greatest of all public health measures.

DR. FRANKLIN H. MARTIN, representing the American College of Surgeons, recounted the activities of the members of this organization during war, stating that its membership was 4,000, 400 of whom were from the Provinces of Canada. Along with other societies, the members of the American College of Surgeons had offered their services to the government. He urged the 115,000 physicians who had offered their services so magnificently to the country to still stand by the government. They should not think of their disappointments but of the necessity of working for and aiding the government at all times.

THE SECOND VICTORY MEETING

Thursday Evening, June 12

This meeting was held in the Garden Pier, June 12, at 8:30 p. m., with President Lambert in the chair.

DR. GEORGE E. BREWER, New York, spoke on some of the problems encountered by the medical department of the American army in the actual theater of war. A great change and great improvement in results had taken place in the treatment of medical and surgical conditions during the two or three years since the commencement of the war. He had received two vivid mental impressions. In the early spring of 1915, during the end of the first year of the war, he was on the staff of a small hospital near the front, associated with the sixth French army. He vividly recalled his first visit to a large hospital shortly after a sharp engagement in the neighborhood with every battle casualty of the graver type. During this visit he was deeply impressed by the evidence of great illness on the part of the wounded soldiers who occupied beds. One could see the hectic flush of sepsis, the patients lying with sunken eyes and with evidence of great prostration. There was not a single case of compound fracture that was not the seat of profound, deep seated infection. There was not a thoracic wound that was not accompanied by a grave complication of pneumonia or empyema. There were more cases of gas gangrene than he had previously seen in his entire professional life. The whole impression was one of surgical disaster because the soldiers were not receiving the best treatment on account of these conditions. All recognized that the wounds of this war differed from the wounds of civil life as they likewise differed from wounds in previous wars in their general character and extent, in their amazing multiplicity, and in their shocking and paralyzing effects from high explosives, with cruel lacerations of tissue and the highly virulent infections which accompanied them. How best to prevent or combat infection was the great problem of the military surgeon.

The second picture that Dr. Brewer painted occurred in the summer of 1917, when he went to France with the hospital unit with which he was connected. Of the military hospitals he saw shortly after arriving, none was so well equipped and so well organized as that under Professor Depage. In this hospital, with battle casualties of the same general character as he had previously mentioned, there was little evidence of sepsis. As one went through the wards, the patients looked cheerful and on the road to recovery. While there were some exceptions, the majority of patients looked well and were far from manifesting any depression. As he went into the operating and dressing rooms he saw that scrupulous technic always characteristic of this particular hospital. He saw no sepsis, and as a matter of fact, of the thousands of patients in that hospital there were very few suffering from septic infection. The picture in three years had undergone a remarkable change, as the result of three factors: First, a general recognition of the fact that the plan carried out in the beginning of the war of having the larger and most important hospitals and best surgeons in the rear was a failure. It was a great mistake. Second, there was developed during that period a splendid, careful, scrupulous technic which did much to overcome infection in battle casualties. Third, there was a general recognition of the fact that the golden opportunity was found to be between the receipt of the wound when it usually became contaminated and the point at which infection took place in the tissues, and if it were possible to receive wounded soldiers during that period, and careful débridement, first suggested by Professor Le Maitre, was carried out, the results were really remarkable.

LIEUT.-COL. SIR SHIRLEY MURPHY, England, said that victory was never attained without some misfortune and loss of life. One of the most important events that had happened as a result of the war is that the two great nations, the United States and Great Britain, found they had interests in common, a community of interests, and a community of ideals. Both nations were striving to move forward hand in hand. This idea on the part of both nations had manifested itself very strongly during the last three or four years and could not help but be of enormous benefit to mankind. Of the various professions, the medical profession had done more than any other in the valuable service it had rendered to humanity.

In England they were contemplating work along the same lines that were being thought out in America, namely, a ministry of health, the inspection of schoolchildren, the inspection of boarding houses, of dealing with prenatal conditions—in a word, following the child from the cradle to the grave, or even before it is born.

Another point made manifest as a result of the war was the need for improvement in education, not only in the early days of the student's career, but in postgraduate training, so that there had been set up in Great Britain postgraduate lectures which enabled the members of the profession to keep in touch with the more recent knowledge which was from time to time being disseminated.

REAR ADMIRAL EDGAR R. DIMSEY, England, said he considered it a great privilege and honor to bring good will

from the British Navy Medical Society, to which he had the honor to belong, to the members of the American Medical Association. He expressed his appreciation of the extreme courtesy and kindness he had received from members of the medical profession in America, and that it would be his privilege and great pleasure to carry back to England the happiest memories of his visit to the great VICTORY MEETING of the Association.

DR. SENICHI UCHINO, Tokyo, Japan, said that as a representative of his country he deemed it an honor to express his great pleasure at being present on this auspicious occasion. He emphasized the great work that the medical profession of America and of other countries had done during the recent war, both in the Army and the Navy, in working for a cause which reflected, not only the patriotism of their own country, but striving for justice to humanity. He referred to the progress made in sanitation and in the prevention of disease by American physicians, saying that it was remarkable, and that it had made a profound impression on the members of the medical profession of Japan. Japan owed much to America for the great progress made in the treatment of wounds during this war. He thanked the Association for the opportunity of addressing the members at this VICTORY MEETING and for the uniform courtesy and kindness extended to him as a representative of Japan.

MAJOR S. T. LEE, China, said he considered it a great honor and pleasure to be present at this historic gathering of the American Medical Association, an Association which had no rival in its achievements in the world. He thanked the Association for the many courtesies extended to him personally, and above all he would carry away with him some very pleasant remembrances of his visit to the United States of America.

SURGEON-GENERAL MELIS of the Belgian army said he felt much gratified to have the opportunity to bring cordial and fraternal greetings from the Belgian Medical Board to the United States. It was a great honor to take part in this VICTORY MEETING in America, a country which had given to the world so many great and generous ideas. In the recent war America had not only given freely of her immeasurable supply of men and material, but had done much for the great cause of justice and for the freedom of mankind. This war would redound to the glory of America. He predicted that this VICTORY MEETING would result in a stronger and more enduring fellowship among the members of the medical profession of the world. America, he said, had been a mother to Belgium, and he expressed the hope that the United States would continue to be a godmother of Belgium in every way in the future. In his double capacity as surgeon-general of the Belgian army and as president of the Belgian Red Cross, he extended his deepest gratitude and hearty appreciation to the whole people of America.

COL. J. S. EASBY SMITH, of the selective service regulations, Washington, D. C., stated that during the eighteen months of the draft there were 155 district boards, 12,079 local boards, and a total number of medical advisory boards of 9,577. The total number of physicians who actively and continuously, at an enormous sacrifice, aided in the selective draft was 26,419. One should bear in mind that there were 40,000 physicians acting in some capacity or another in the Army and Navy. The total number of registrants physically examined during the entire period of the draft was 5,719,152.

Colonel Smith then read extracts from General Crowder's report to the Secretary of War and to Congress, in which eloquent tribute was paid to the labors and efforts of the American Medical Association and the medical profession during the great crisis. Finally, during this present period of unrest, of reeducation and rehabilitation of our men, he urged the physicians of the United States to devote themselves to patriotic efforts in helping to carry on this great work.

The meeting was also addressed by MAJOR PAUL BÉGOUIN, Bordeaux, France, and by DR. ALEXANDER ALEXION of Greece, after which the meeting adjourned.

THE SCIENTIFIC EXHIBIT

The exhibits in the various booths in the Casino were as follows:

1. Exhibit of United States Department of Agriculture, Bureau of Chemistry.

2. Bureau of Census. Numerous charts showing rise and fall in the number of cases during the recent influenza epidemic.

3. Researches of toxic action of mustard gas, University of Michigan, by Dr. A. S. Warthin, and Dr. Carl V. Weller, showing lesions produced by mustard gas in various parts of the body.

4. Mayo Clinic. Treatment of high grade myxedema with thyroxin. Determination of metabolic rates following its injection. Studies on cholesterol. Isolation and identification of thyroxin. Roentgen-ray exhibit of mediastinal tumors, Hodgkin's disease, primary cancer of the lungs, cancer metastasis, gastric syphilis, and chronic ulcerative colitis. Experimental influenzal pneumonia by Edward C. Rosenow.

5. American Red Cross, first aid department. Numerous illustrations and diagrams of how to render first aid.

6. Council on Pharmacy and Chemistry of the American Medical Association. Exhibit of some of the work the Council has done, with literature on the subject.

7. Chemical Laboratory of the American Medical Association. Investigations the laboratory has made, and literature on the subject.

8. Propaganda Department, showing the work THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION is doing in bringing to the attention of the public the facts regarding the nostrum evil and quackery, illustrated by numerous charts and booklets.

9. Council on Health and Public Instruction. In this booth there were a number of cartoons and hygiene charts and posters on baby welfare, together with a set of various booklets on child welfare, care of the baby in summer, and other publications of the Council.

10. Research Laboratory of Dr. Fenton B. Turck, New York. Work on autolysis and shock.

11. Exhibit of stereoscopic roentgenograms and stereo-Lumière photography by Dr. Emil G. Beck, Chicago.

12. Exhibit of roentgen-ray department, St. Luke's Hospital, New York.

13. Exhibit by members of the staff of the Battle Creek Sanitarium. Exhibit on dietetic management of diabetes. Roentgen-ray exhibit of gastro-intestinal diverticulosis, with duodenal diverticula. Roentgen-ray studies on the diagnosis of acute postoperative ileus. Some electrocardiagraphic studies and demonstrations of the technic and value of the Bergell carbohydrate tolerance test.

14. The Lying-In Hospital of the City of New York. Numerous charts of cases of normal pregnancy and charts of cases of preeclampsia and eclampsia.

15. Children's Bureau, United States Department of Labor, showing deaths under 1 year of age, grouped by cases; also deaths under 1 year of age by monthly age group, and reduction in infant mortality according to fathers' earnings.

16. Radium Therapy, by Dr. D. T. Quigley, Omaha. This was an excellent exhibit showing the results of the action of radium in cases of epithelioma, sarcoma, myxosarcoma, etc.

17. Charts of operations on the gastro-intestinal tract, based on physiology of the stomach and intestine, by Dr. J. Shelton Horsley, Richmond, Va.

18. Exhibit of chronic gonorrheal infections of the seminal vesicles, by Dr. Victor C. Lespinasse, Chicago. New technics on how to treat the chronically infected vesicle through the vas deferens. Percutaneous puncture of the vas and sensitiveness of the epithelium of the vas to irritants. Many of the commonly accepted antiseptics that are considered nonirritant will absolutely destroy the epithelium of the vas, producing stricture and consequent sterility.

19. Exhibit of Prudential Insurance Company, Newark, N. J., showing charts of influenza and respiratory diseases

in nine American cities during the epidemic period of 1918; also charts showing the prevalence and number of cases of influenza in England and Wales for several periods.

U. S. ARMY EXHIBIT AT EXPOSITION BUILDING

In connection with the Victory Meeting there was an exhibit at the Exposition Building by the Medical Department of the U. S. Army. There were seventeen different exhibits, covering all phases of the work which has placed the medical department on the high standard that it now enjoys.

The laboratory section showed the control of diseases in the various camps and also some excellent pathologic specimens, while the tests for the aviation service were very interesting. The sanitation exhibit had a complete set of sanitation models and photographs and charts illustrating methods of sanitation in the various camps and cantonments.

The section of reconstruction had complete work shops with the boys themselves at work, showing methods of education of wounded men.

The hospital division gave a complete description of the method of handling patients on their arrival at a hospital from overseas and their assignment to the proper wards. There were models of base hospitals and general hospitals. The division of surgery illustrated roentgen-ray work in the hospitals and in the fields, and many different styles of splints and their application were to be seen in the orthopedic section.

Perhaps the greatest success of surgery of the present age was shown in the maxillofacial section, where plaster and wax models of faces were to be seen, showing the work that was accomplished in this art during the great conflict.

The exhibit from the Army Medical Museum at Washington showed the treatment of wounds and skin diseases as perfected by the army medical department.

U. S. NAVY EXHIBIT AT EXPOSITION BUILDING

The U. S. Navy exhibit was carefully planned to represent the various activities of the medical department, and was arranged in such a way that it gave an excellent idea of the manner in which the recruits were received into the service and the provisions which were made for their medical care under the various conditions which might arise in the course of their service in the navy. The measures for the protection of the health of the naval personnel on board ship were exhibited by means of models of the battleships and other types of vessels. A large model of the medical department of one of the latest dreadnaughts presented an interesting picture of the medical and surgical facilities on board.

The arrangement for receiving and training recruits, and the methods of eliminating and controlling communicable diseases at training stations, were demonstrated by means of accurate models of dispensaries and isolation cubicles and by mechanical drawings.

For those who were interested in the more technical methods there was a complete mobile laboratory unit at work, illustrating the navy technic for the detection of meningococcus and diphtheria carriers; methods of preparing culture mediums, and the use of specific therapy.

The valiant land army, the marines, who formed a part of the navy, were represented by models and other interesting material from the great training center for the marines at Quantico, Va. Here was presented a very complete picture of the methods which were used to control an extensive malaria problem. By means of models, there was presented the work which was done to control thoroughly a large mosquito-breeding area.

One of the great activities which fell to the navy during the war was the transportation of the troops to and from Europe. This was represented by a model of the largest naval transport, the U. S. S. *Leviathan*, which showed how more than 10,000 troops were berthed and cared for during each trip.

The work of the central organization, the Bureau of Medicine and Surgery, was indicated by many charts, which showed the methods for the prevention and control of communicable diseases and for keeping constantly informed of health conditions in the navy, scattered as it was all over the world.

Among other things were shown complete statistics for influenza, tuberculosis and the venereal diseases.

Award of Prizes in the Scientific Exhibit at the Victory Meeting

The committee had great difficulty in judging between individuals and large organizations, such as government departments, representing an extensive corps of unnamed workers. In consideration of the manner in which awards have been made in the past, the committee felt that its functions would be best performed by laying emphasis on the excellence of individual effort. Accordingly, the awards are as follows:

Gold Medal—Dr. H. S. Warthin.
Silver Medal—Hideyo Noguchi.
Certificate 1—The Mayo Clinic.
Certificate 2—Dr. J. Shelton Horsley.

The committee desires to express its high appreciation of the interest and educational value of the U. S. government exhibits, and feels called on to commend those who have been instrumental in bringing to this meeting these splendid displays. The committee feels that special recognition should be given to the demonstrations made by the Medical Department and the Army and Navy, and by the Public Health Service.

WALTER CANNON,
E. R. LECOUNT,
C. C. BASS.

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FOREIGN DELEGATES AND GUESTS AT THE ATLANTIC CITY SESSION

Physicians from fourteen foreign countries were in attendance at the Victory Meeting. A list of these foreign guests follows:

Lehman, Wilmer S., Lolodorf, Cameroun, W. Africa
Casier, Baron Ernest, Belgium
Depage, Antoine, Belgium
Duesberg, J., Belgium
Melis, L., Brussels, Belgium
Nolf, P., Brussels, Belgium
Sand, Réné, Brussels, Belgium
Captain Van de Velde, Belgium
Chutro, Pedro, Buenos Aires
Aikins, W. H. B., Toronto, Can.
Bagshaw, Elizabeth, Hamilton, Can.
Buchanan, W. D., Peterboro, Ont.
Chartier, Aimé, Sorel, Quebec, Can.
Cleaver, Ernest E., Toronto, Can.
Clendenan, G. W., Toronto, Can.
Cody, William, Hamilton, Can.
Craig, Robert H., Montreal, Can.
Dibbie, W. J., Weston, Can.
Dixon, W. E., Grand Mere, Can.
Ewing, Francis James, Vancouver, Can.
Farris, H. A., East St. John, N. B.
Ferguson, W. A., Moncton, Can.
Fleming, Francis P., St. John, N.B.
Gallivan, James V., Peterboro, Can.
Hastings, Chas. J., Toronto, Can.
Hicks, E. S., Brantford, Can.
Hill, Clarence E., Toronto, Can.
Johnston, Samuel, Toronto, Can.
Kendall, W. B., Gravenhurst, Ontario, Can.
Lauterman, Maxwell, Montreal, Can.
Mallory, Fred, Toronto, Can.
Mann, Arthur H., Olds, Alberta, Can.
Minns, Fredk. S., Toronto, Can.
Mitchell, J. P., Toronto, Can.
Mowbray, F. B., Hamilton, Can.
Mullin, R. H., Vancouver, B. C.
Neal, Frank C., Peterborough, Can.
Rabinowitch, I. M., St. Anne de Bellevue, Quebec, Can.
Rawley, W. E., St. John, N. B.
Ross, George T., Montreal, Can.
Starr, Clarence L., Toronto, Can.
Sutton, A. B., Port Credit, Can.
Waldron, C. W., Montreal, Quebec, Can.
Willinsky, A. I., Toronto, Can.
Wishart, D. J. Gibb, Toronto, Can.
Young, William A., Toronto, Can.
Lee, S. T., Peking, China
Leonard, Eliza E., Peking, China
Ming-Shao, Hsu, China
Peter, William Wesley, Shanghai, China
Ting-han, Chang, China
Almila, E., Havana, Cuba
Carrera, Julio, Cuba
Fernandez, Francisco M., Havana, Cuba
Guiteras, Juan, Cuba
Martinez, Emilio, Cuba
Somodevilla, Santiago U., San Luis, Cuba
Kingman, E. L., Zaruma, Ecuador
Brown, W. Herbert, Glasgow, Scotland
Dimsey, Edgar R., British Admiralty
Groves, Ernest W. Hey, England
Hurst, Arthur F., England
Lane, Sir William Arbuthnot, England
Murphy, Shirley, England
Newsholme, Sir Arthur, England
Rose, Frank A., London, Eng.
Thompson, Sir St. Clair, London, Eng.
Bégouin, Paul, Bordeaux, France
Lemaitre, Fernand, France
Picqué, Robert, Bordeaux, France
Alexion, Alexander, Greece
Constas, John, Greece
Allen, Belle Jane, Baroda, India
Fletcher, A. G., Taiku, Japan
Kamimura, Asajiro, Tokio, Japan
Kodama, Ryuzo, Japan
Uchimo, Senichi, Tokio, Japan
Holst, Peter F., Norway
Muro, Pelipe, Lima, Peru
Ingvar, Sven, Lund, Sweden.

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SATURDAY, JUNE 21, 1919

THE SPIROCHETE OF INFECTIOUS HEMORRHAGIC JAUNDICE IN AMERICA

Only a few years have elapsed since Inada and Ido inoculated guinea-pigs with the blood of patients suffering from a form of infectious jaundice resembling Weil's disease and thus transmitted an experimental malady accompanied by jaundice, hemorrhage, albuminuria and other characteristic symptoms. The Japanese investigators then discovered both in the blood and various organs of the animals and in human specimens a new micro-organism, designated by them *Spirochaeta icterohemorrhagiae*, and since demonstrated without question to be the etiologic agent in Weil's disease.[1] On account of certain distinctive features of the infective organism, Noguchi[2] of the Rockefeller Institute for Medical Research has regarded it as a new genus for which he has suggested the name *Leptospira*. These spirochetes have since been examined in many parts of the world; and there is now no reason to assume that the Japanese, Belgian and American strains are other than identical.

Noguchi has found that rats captured in New York City and vicinity harbored the spirochete in question. He believes that the finding of the causative organism of infectious jaundice among wild rats in this country and the identification of this strain with the strains found on other continents is particularly important in that it reveals a latent danger to which we are constantly exposed. But New York is not the only community liable to be invaded by these neighborhood enemies. Spirochetes capable of conveying hemorrhagic jaundice to guinea-pigs have been reported from Nashville[3] and from Washington.[4] According to a report just issued from the John McCormick Institute for Infectious Disease, Chicago rats are by no means free from the infectious organisms.[5] Spirochetes resembling those described as the cause of acute infectious jaundice were demonstrated in occasional animals —two out of thirty rats examined—indicating that they are probably not present in a high percentage of the rodents. Nevertheless, the spirochetes have been found, and this fact of itself constitutes a latent danger. They were demonstrated in material from the mouth and in tissue from the kidney. It is suggested by Otteraaen that, because of the presence of spirochetes in the mouths of rats, it is possible that, at the time of the bite, organisms may be carried into the wound by the saliva or teeth, and disease may in this manner be transferred directly from the rat to man.

The apparent immunity of rats to any noxious effect from the pathogenic organisms which they thus harbor is surprising. In some places more than one fourth of the rodents caught and examined have been found infected with the spirochetes, so that we must assume that a pronounced tolerance to them has been developed. If the present freedom of man from more widespread infection is to continue, suitable sanitary conditions in relation to this threatening factor in his environment must be maintained.

1. Inada, R.: Ido, Y.; Hoki, R.; Kaneko, R., and Ito, H.: J. Exper. M. **23**: 377 (March) 1916.
2. Noguchi, H.: Spirochaeta Icterohaemorrhagiae in American Wild Rats and Its Relation to the Japanese and European Strains, J. Exper. M. **25**: 755 (May) 1917.
3. Jobling, J. W., and Eggstein, A. A.: The Wild Rats of the Southern States as Carriers of Spirochaeta Icterohemorrhagiae, J. A. M. A. **69**: 1787 (Nov. 24) 1917.
4. Neill, M. H.: The Problem of Acute Infectious Jaundice in the United States, Pub. Health Rep. **33**: 717 (May 10) 1918.
5. Otteraaen, A.: The Spirochete of Infectious Jaundice (Spirocheta Icterohemorrhagiae, Inada; Leptospira, Noguchi) in House Rats in Chicago, J. Infect. Dis. **24**: 485 (May) 1919.

THE VICTORY MEETING

From every point of view the annual session of the Association held at Atlantic City last week must be considered a success. The attendance far exceeded the expectations of the most optimistic; the registration was 4,929, exceeding by nearly 1,000 the registration of the largest previous Atlantic City session, held in 1914; in fact, the registration this year has been exceeded only by that of the Chicago and New York sessions.

An unusual feature was the new arrangement for section meetings by which each section holds only one meeting a day. This plan was carried out by all of the sections except one, and the House of Delegates directed that the plan be continued.

The special VICTORY MEETINGS on Wednesday and Thursday evenings and the war sessions held Thursday afternoon, devoted to general medicine and surgery, were a novelty of this session. These meetings were well attended, the foreign guests and distinguished representatives of American organizations were enthusiastically received and the programs were instructive. Reports of these meetings appear in this and in the next number of THE JOURNAL.

The sessions of the House of Delegates were unusual especially because of the sociologic-medical aspects of the questions discussed. Narcotic addiction, social insurance, physical education, pharmaceutical interests, the publication of new journals, antivivisection legislation, daylight saving and the securing of permanent benefit from the medical work of the war—these were some of the subjects which engaged the attention of the House and on which definite recommendations were

made or action taken. These are reported in the published minutes of the House of Delegates.

Among other attractions the scientific and commercial exhibits were exceptional both in the quantity and character of the material presented. In the scientific exhibit special notice should be given to the demonstrations by the Army and Navy Medical Departments and the Public Health Service of work both during the war and in preparation for peace. Connected with the scientific exhibit was a continuous motion picture performance in which were shown many new educational films.

Finally, it is not amiss to add here a note of thanks to the physicians of Atlantic City for their cooperation. Arranging for an annual session of the Association requiring numerous meeting places, large exhibit space and hotel accommodations for over 5,000 physicians and their guests is no small task. The aid given by an active local committee on arrangements is a determining factor in the success of the session.

METABOLISM IN PERNICIOUS ANEMIA

Pernicious anemia has assuredly not lacked investigation in recent years. The trend of the studies of this disease has been toward the more obvious abnormalities of the blood and the hemopoietic organs. There has been much searching for hemolytic compounds presumably elaborated in the disease processes and responsible for the great decrease in red blood cells. Many investigators have sought the cause of the anemia in some disorder of the gastro-enteric tract whereby harmful products of enterogenous origin are produced and absorbed. Indeed, from time to time, various chemical substances have actually been charged with responsibility for the uncontrollable hemolysis which brings about the untoward symptoms; but the proof for their etiologic rôle has in no case been firmly established.

Some of the pathochemical manifestations of pernicious anemia have recently been summarized by Kahn and Barsky,[1] who emphasize the familiar upset in the alimentary digestive functions. Helpful as such studies may be in the management of the diet and nutrition of patients, they fail to give anything like a complete picture of the metabolism in pernicious anemia. Most of the functions of the pancreas, liver and kidneys are reported as undamaged; and the hypothesis of the existence of "a state of suboxidation" as proposed by Kahn and Barsky hangs on extremely slender evidence. Far more striking are the calorimetric observations made by Meyer and Du Bois[2] on patients suffering from the disease. Their results show an increased metabolism in pernicious anemia, which was especially pronounced when the hemoglobin content of the blood fell to 20 per cent. of the normal. The explanation of this phenomenon observed with the Sage calorimeter has been problematic. Recent additional metabolic observations at the Peter Bent Brigham Hospital in Boston, by Tompkins, Brittingham and Drinker,[3] may furnish a key to the solution. They noted that before treatment the metabolism may be within normal limits or it may be above or below normal. After transfusion the metabolism always reaches a normal or diminished level. What is the interpretation of such changes? Transfusion produces a diminution of pulse rate and respiratory activity, and a drop in temperature if it has previously been elevated. But according to the Boston investigators the response of the metabolism to transfusion lags behind that of all the other factors by an interval of several days. The lowering of metabolism is, therefore, not due simply to a cessation of the compensatory muscular activity of the anemic individual. Tompkins, Brittingham and Drinker venture the opinion that in untreated acute cases it is evident that, outside of the heightened activity of the cardiac and other muscle, there is some type of stimulation to the body cells in general, and the amount of this stimulation is represented by the fall in metabolism after transfusion. There are coincident progressive tissue alterations which tend to reduce metabolism. These alterations are represented by the diminished metabolism of the chronic cases, and by the low level to which the metabolism falls in practically all cases as a result of transfusion.

On the basis of the foregoing hypothesis the lowered energy output of a chronic case of pernicious anemia represents the profound reduction in active tissue that is present in the terminal stages of the disease. In such conditions transfusion offers little promise of help. But in the earlier stages in which metabolism still remains at a normal level when the accelerated muscular efforts are excluded, some advantage may be expected. As the latest investigators[3] express it: While a course of transfusions does not prevent the development and progress of neurologic lesions, it does postpone the muscular sluggishness, which eventually reduces the chronic case of pernicious anemia to the state of a helpless burden. Relief always represents desirable therapy even if cure is seemingly impossible.

1. Kahn, M., and Barsky, J.: Studies of the Chemistry of Pernicious Anemia, Arch. Int. Med. **23**: 334 (March) 1919.

2. Meyer, A. L., and Du Bois, E. F.: The Basal Metabolism in Pernicious Anemia, Arch. Int. Med. **17**: 965 (June) 1916.

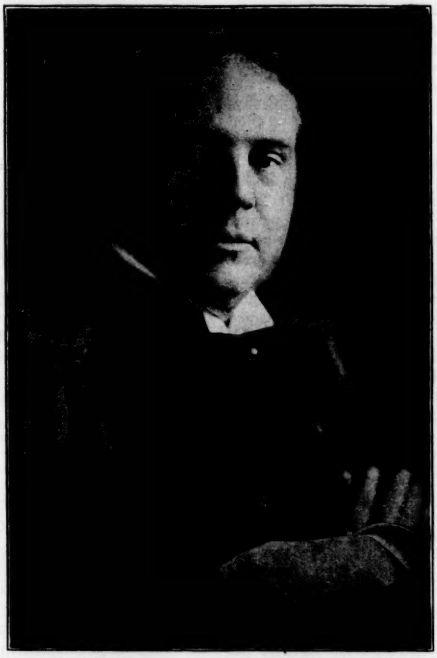
3. Tompkins, Edna H.; Brittingham, H. H., and Drinker, C. K.: The Basal Metabolism in Anemia with Especial Reference to the Effect of Blood Transfusion on the Metabolism in Pernicious Anemia, Arch. Int. Med. **23**: 441 (April) 1919.

The Nursing Problem.—On the one hand, if artificial barriers are hindering women who could and would give good service at the bedside of the sick from rendering that service, those barriers must come down. Any standards of educational requirements and training maintained solely for the purpose of making the nursing field a closed preserve must give way before the public need. On the other hand, we may as well concede the annoying and deplorable fact that attempts to exact of nurses a degree of altruism and abnegation which are not expected of or practiced by any one else have slight chance of success.—*Modern Hospital.*

Current Comment

THE PRESIDENT-ELECT, SURGEON-GENERAL WILLIAM C. BRAISTED

The election of Dr. William C. Braisted, Surgeon-General of the Medical Department of the Navy, as President of the American Medical Association was particularly appropriate to the VICTORY MEETING. Thus the Association not only honors the man it elects but is itself honored. Dr. Braisted's career represents a steady progress through many delicate tasks and difficult assignments. He was born in Toledo, Ohio, in 1864, and was graduated by the University of Michigan in 1883, and by the medical department of Columbia University in 1886. He served as intern in Bellevue Hospital, New York, for two and one-half years, entering civilian practice in Detroit in 1888 and continuing until 1890, when he entered the Navy as assistant surgeon. He was promoted in 1893 to passed assistant surgeon, then to surgeon, and in 1913 to medical inspector. In the routine of a naval career he has served on a number of vessels and at many naval hospitals, and twice has been instructor in surgery in the naval medical school. In 1904 he fitted out and equipped the hospital ship *Relief*. During the Russo-Japanese War he went to Japan as the representative of the Medical Department of the United States Navy, and his report on this assignment was considered by the Japanese officials to be the most accurate and complete published. Surgeon-General Rixey appointed him assistant chief of the Bureau of Medicine and Surgery; he continued in this service for six years, from 1906 to 1912, serving also under Surgeon-General Stokes. During 1906 and 1907 he was attending physician at the White House. He acted as fleet surgeon of the Atlantic Fleet from 1912 to 1914, when he became Surgeon-General of the Navy with the rank of rear admiral. He has been decorated twice by foreign governments—first by the emperor of Japan and later by the president of Venezuela. Admiral Braisted is especially noted for the interest he has taken in preventive medicine. He has given particular attention to the control of venereal diseases. Under his administration the Department of Medicine of the Navy has made a most enviable record, as indicated by the remarkably low mortality and morbidity records of the men in the naval service. The election of Admiral Braisted at this time is especially fitting: it recognizes the service without whose aid the winning of the war would not have been possible.



REAR-ADMIRAL WILLIAM C. BRAISTED
Surgeon-General, U. S. Navy
PRESIDENT-ELECT OF THE AMERICAN MEDICAL ASSOCIATION

MALNUTRITION CLINICS AND STUDENTS OF DIETETICS

Not long ago reference was made in THE JOURNAL to what may be accomplished in the case of malnourished or delicate children by the class method of dietetic and hygienic treatment described by Emerson[1] in 1910 and more recently by Smith.[2] The procedure is similar in many ways to that pursued in the classes for the tuberculous, and it aims at personal education and realimentation with the cooperation of both the patient and his family. There can be little question today that the problem of bringing many underweight children up to normal is largely one of diet. At the University of Chicago the needs of underweight children selected after competent medical examination from cases at the Central Free Dispensary of Rush Medical College were made the subject of attention of advanced students in academic courses in applied dietetics. According to Lydia Roberts,[3] who supervised the work, the children were all given thorough examination and all necessary medical treatment by the physicians, who then referred those in need of dietary help to the diet specialists, exactly as eye and ear cases were turned over to their respective clinics. Children in need of medical supervision reported to the physician each week before coming to the diet class; others with nothing at fault but diet and hygiene came directly to the class. The children met once a week on Saturday mornings. At

1. Emerson, W. R. P.: Class Method in Dietetic and Hygienic Treatment of Delicate Children, Pediatrics **22**: 627, 1910.
2. Smith, C. H.: Methods of Conducting a Class for Malnourished Children, Am. J. Dis. Child **15**: 373 (June) 1918. Medical Help in the Undernutrition of Childhood—What Next? editorial, J. A. M. A. **71**: 974 (Sept. 21) 1918. Emerson, W. R. P.: A Nutrition Clinic in a Public School, Am. J. Dis. Child. **17**: 251 (April) 1919.
3. Roberts, Lydia: A Malnutrition Clinic as a University Problem in Applied Dietaries, J. Home Econom. **11**: 95, 1919.

the clinic the student took special charge of her own cases, listened to the discussion of the others, and helped prepare food exhibits, diet slips, and recipes needed in the class. She made at least one home visit each week, saw that the child attended the clinic regularly, and was held personally responsible if he lost or failed to gain. The results from such beginnings in an enterprise beneficial alike to patient and to student are reported to be gratifying. Parents have been educated, poor hygiene has been corrected, home living conditions have been improved, and, above all, gains of weight have been induced. Food, particularly milk, sleep, and better dietary habits, have contributed most to the favorable outcome. This success, though representing only the beginnings of what may become a large sociological and hygienic enterprise, furnishes an added illustration of the mutual advantage of contact between a student and a patient in the modern scheme of clinical instruction.

FAT ABSORPTION IN INFANCY

The consideration of the quantity of "fat," in the form of either neutral fat, fatty acid or soap, in the stools of infants takes a prominent part in the clinic of diseases of childhood. There have been periods within the past few decades when the question of the digestion and absorption of fats in the alimentation of infancy has almost seemed, to those not solely concerned with problems of this sort, to receive an emphasis out of all proportion to its comparative significance. The starting point for the estimate of good, tolerable or deficient utilization of fats and the diagnosis of any disorders consequent on a disturbance of this function lies in a knowledge of what constitutes the normal condition in health. In the case of the adult, the statistics on this point are concordant and conclusive for a considerable number of fats of both animal and vegetable origin. Ninety-five per cent. or more of ingested fat ordinarily is absorbed, so that even when it is consumed in amounts above 100 gm. (3½ ounces) the utilization of fat may be regarded as excellent in the healthy person. These established findings are now supplemented by new statistics from breast fed infants in this country. Analyses made by Holt, Courtney and Fales[1] of New York on the feces of thirty well nourished infants who were gaining normally shows a range of fat absorption of from 90 to 99 per cent. of the intake. The fat of the stools averaged 34.5 per cent. of the dried weight, and frequently was as high as 50 per cent. About one third was in the form of soaps. In absolute amounts, the daily fecal excretion of fatty material rarely exceeded 2 gm., and was sometimes less than 0.5 gm. Here, then, is another illustration of the danger of thinking in terms of percentage composition when small quantities are involved. A stool may be half fat, and yet that half may amount to only a gram or two in absolute quantity, when little alimentary residue appears as feces. According to the New York investigators, no constant relation was shown between the percentage of fat in the mother's milk and the percentage of total fat in the stool.

1. Holt, L. E.; Courtney, A. M., and Fales, H. L.: A Study of the Fat Metabolism of Infants and Young Children, I, Fat in the Stools of Breast Fed Infants, Am. J. Dis. Child. **17**: 241 (April) 1919.

SHOCK AND FAT EMBOLISM

Among the numerous theories to account for the production of shock as observed at the front during war time the hypothesis that it is due to fat embolism has been frequently mentioned. Porter, who visited the battlefields of France to study shock, has strongly championed the explanation cited. In his essay on "Shock at the Front"[1] he wrote:

> I have myself examined more than a thousand wounded. Save a few wounds of the abdomen, in which the blood vessels or their nerves in that great vascular region were probably directly injured, there has been no case of shock except after shell-fractures of the thigh and after multiple wounds through the subcutaneous fat. In these, closure of the capillaries by fat-globules is known to take place. This is strong support for my discovery that shock may be produced in animals by injecting fat into the veins.

Numerous investigators, however, have taken exception to this seemingly simple explanation of how shock originates. For instance, the investigation of what actually happens to animals subjected to severe concussion of the sort that provokes "explosive shock" has included a study of the possible presence of fat in the blood vessels. Intravascular fat in the form of droplets of widely varying sizes has been commonly found. Unfortunately for the embolism hypothesis, intravascular fat has been found in the same localities in normal animals of the same species. McKibben,[2] at the Army Neurosurgical Laboratory at the Johns Hopkins Medical School, demonstrated the presence of fat in the blood vessels of all the animals examined, no matter whether they had been shocked by air concussion or not. No quantitative or qualitative differences have been detected between the fat found in the vessels of the shocked animals and the intravascular fat of normal ones. The same is true with respect to the intravascular fat found in prolonged anesthesia. Any hypothesis of shock by fat embolism must take cognizance of these facts.

ANDREAS CAESALPINUS

The present year marks the four-hundredth anniversary of the birth of Caesalpinus, the botanist and writer on medical topics, to whom, along with Servetus, Realdus, Columbus and others, the discovery of some of the fundamental principles of the circulation of the blood has been ascribed in days gone by. It has been remarked that all great men have their detractors. Harvey, the real discoverer of the circulation of the blood, has been no exception to this statement. Nevertheless, his fame rests so securely in our day, and the immense significance of the method of study which he employed in relation to the circulation is so generally admitted, that the alleged claims of others to priority need give us no concern. At most, the circuit of blood through the lungs had been only vaguely defined before Harvey published his epoch-making work. Caesalpinus was among those who entertained ideas about the movement of the blood. To his credit, it may be said that he was bold enough to shake off

1. Porter, W. T.: Shock at the Front, Boston, 1918.
2. McKibben, P. S.: A Note on Intravascular Fat in Relation to the Experimental Study of Fat Embolism in "Shell Shock," Am. J. Physiol. **48**: 331, 1919.

the domination of galenic theories. Caesalpinus seemingly grasped the possibilities of the pulmonary circulation. He "recognized that the flow of blood to the tissues took place by the arteries and by the arteries alone, and that the return of the blood from the tissues took place by the veins and not by the arteries." With Sir Michael Foster[1] we are inclined to believe, however, that the conclusions of Ceasalpinus were the result of controversial argument rather than of patient research, such as characterized Harvey's transcendent discoveries. There is no record of observations or experiments in the writings of Caesalpinus. We may therefore point to his failure to reach a real goal as an illustration of the incomparable superiority of the true scientific method. Even today, more than three centuries after the events recorded, the foremost reason why Caesalpinus failed whereas Harvey succeeded deserves to be brought home anew to those who tread the paths of the medical sciences.

Medical Mobilization and the War

Personnel of the Medical Department

For the week ending June 13, there were 13,931 officers in the Medical Corps, a decrease of 975 from the previous week. The Medical Reserve Corps contained 2,414 officers. The total number of medical officers discharged since the beginning of the war is 18,056.

Bulletin A. E. F., Final Number

(June 2, 1919)

Some interesting figures are presented as to pathologic studies made by the pathologists of the A. E. F. The records include 14,000 protocols made by 450 pathologists. Two hundred and sixty-eight of the pathologists have been graded as good or very good on the basis of their scientific and technical knowledge; 180 were classified as fair, and two as very poor. The record will be kept on file in Washington, and will be available for study.

STATISTICS ON TYPHOID AND PARATYPHOID

The complete figures on typhoid and paratyphoid fever in the A. E. F., including Italy and Russia, are published in this issue of the Bulletin. The tabulation follows:

	Typhoid		Paratyphoid	
	Cases	Deaths	Cases	Deaths
1917*—				
August	..	..	..	..
September	..	..	..	..
October	..	..	..	..
November	2	..	..	..
December	..	1	6	..
1918—				
January	2	1	1	..
February	..	2	..	..
March	..	..	1	..
April	4	2	..	..
May	1	..	..	..
June	8	..	1	..
July	109	2	1	..
August	45	10	5	..
September	59	12	16	1a
October	43	7	8	..
November	70	12	16	1b
December	161	25	28	..
1919—				
January	232	33	33	..
February	169	9	9	..
March	212	35	35	..
April	92	4	7	..
May	39	..	3	..
Totals	1,248	155	170	3

* No cases or deaths reported in July, 1917.

MONTHLY REVIEW

The onset of fair weather in April, continuing throughout May, has caused a reduction in all communicable diseases.

1. Foster, Sir Michael: Lectures on the History of Physiology, Cambridge University Press, 1901.

Appropriation for Medical Department, U. S. Army

The sum of $5,000,000 is authorized to be expended for supplies for the medical and hospital department of the United States Army during the fiscal year beginning July 1, 1919, in the Army appropriation bill now under consideration by Congress. This appropriation includes many specific items necessary to the operation of the Surgeon-General's department. The Surgeon-General is authorized to spend an additional $20,000 for the purchase of books and periodicals for the library of the Medical Department and $10,000 is authorized for the purchase and preservation of specimens for the Army Medical Museum. The Surgeon-General is directed to expend $60,000 for the care of officers and enlisted men in hospitals in the Canal Zone. For paying nurses, $80,000 is authorized; for contract surgeons, $90,000; for reserve veterinarians, $350,000; for hospital matrons, $3,600.

HONORABLE DISCHARGES, MEDICAL CORPS, U. S. ARMY

NOTE.—In the following list, L. signifies lieutenant; C. captain; M., major; L. C., lieutenant-colonel, and Col., colonel.

ALABAMA

Belle Mina—Pettus, J. J. (C.)
Bessemer—Conwell, H. E. (C.)
Hays, J. H. (L.)
Birmingham—Lotterhos, G. (L.)
Lowrey, J. M. (C.)
Watkins, M. A. (M.)
Chunchula—Reed, J. M. (C.)
Cullman—McAdory, E. D. (L.)
Horton—Waddell, H. G. (L.)
Marion Junction—Donald P. Y. (L.)
Samson—Lewis, B. J. (L.)
Spring Hill—Ross, C. H. (M.)
Talladega—Warwick, B. B. (L.)
Ward—Allen, W. E. (L.)

ARIZONA

Morenci—Jay, C. (M.)
Phoenix—Bryant, J. H. (L.)
St. John—Bouldin, T. J. (L.)

ARKANSAS

Gentry—Steele, R. W. (L.)
Little Rock—Ogden, M. D. (M.)

CALIFORNIA

Alameda—Hamilton, J. K., Jr. (C.)
Berkeley—Force, J. N. (C.)
Eureka—Chain, J. N. (C.)
Fresno—Pettis, J. H. (C.)
Guadalupe—Franklin, J. H. (C.)
Los Angeles—Dodge, W. W. (L.)
Fairchild, F. D. (M.)
Lupton, E. L. (C.)
Rothwell, W. T. (L.)
Shea, D. E. (L.)
Swartz, B. A. (L.)
Tholen, E. F. (C.)
Monrovia—Remington, L. D. (M.)
Oakland—Ball, J. D. (C.)
Powell, A. (M.)
Pasadena—Newcomb, A. T. (C.)
Roberts, W. H. (M.)
Richmond—Smallwood, W. C. (L.)
San Diego—Banks, A. E. (M.)
Proudfoot, C. P. (C.)
San Francisco—McKenney, A. C. (M.)
Levison, C. G. (Col.)
Wilcox, G. B. (L.)
Stockton—McLeish, A. H. (C.)
Six, C. L. (C.)
Taft—Galehouse, F. C. (C.)
Watsonville—Wayland, C. (L.)
Whittier, B. F. (C.)
Willits—Babcock, R. A. (C.)

COLORADO

Cedaredge—Bolton, L. C. (M.)
Del Norte—Miller, H. C. (M.)
Denver—Finney, H. S. (M.)
McEachern, C. G. (C.)
Philpott, J. A. (L.)
Van Gilder, D. W. (C.)
Fort Collins—Atkinson, C. (M.)
Pueblo—Low, H. T. (C.)
Snedec, J. F. (C.)
Work, P. (M.)

CONNECTICUT

Hamden—Lay, W. S. (M.)
Hartford—Rooney, J. F. (C.)
Wilson, J. C. (C.)
Middletown—O'Brien, F. J. (L.)
Norwich—Callahan, J. W. (L.)
Southington—Miller, W. R. (C.)
Terryville—Lawton, R. J. (L.)
Wallingford—McGaughey, J. D. (M.)
Waterbury—Moriarty, J. L. (M.)

DISTRICT OF COLUMBIA

Washington—Hasbrouck, E. M. (C.)
Marks, W. G. (L.)
Price, H. M. (C.)

FLORIDA

Jacksonville—Black, J. B. (C.)
McIntosh—Walkup, A. C. (C.)
Pensacola—Anderson, W. E. (C.)
Tampa—Paniello, S. (L.)
Tavares—Colley, S. C. (L.)

GEORGIA

Atlanta—Boland, F. K. (L. C.)
Garner, J. R. (C.)
Young, L. T. (L.)
Camilla—Turner, J. C. (L.)
Chipley—Parham, L. G. (L.)
Gainesville—Rudolph, H. L. (C.)
Hephzibah—Corley, R. E. (C.)
Macon—Stovall, R. H. (L.)
Milledgeville—Allen, E. W. (C.)
Omega—Webb, M. L. (C.)
Statesboro—Floyd, F. F. (C.)
Kennedy, H. B. (C.)
Sylvania—Cail, J. C. (C.)
Thomson—Bartlett, C. L. (L.)
Tifton—Scarboro, E. R. (C.)
Waycross—Minchew, B. H. (L.)
Winder—Mathews, W. L. (C.)
Zirkle—Kirkland, S. A. (L.)

IDAHO

Coeur D'Alene—Dwyer, J. C. (C.)

ILLINOIS

Beardstown—Charles, T. G. (L.)
Belleville—Meng, W. L. (C.)
Chicago—Andreson, L. H. (L.)
Baker, H. L. (C.)
Berg, E. P. (L.)
Chamness, E. R. (C.)
Champlin, H. G. (L.)
Dagg, T. L. (C.)
DeVry, J. W. (L.)
Eaton, R. C. (C.)
Fainer, E. M. (L.)
Fisk, W. B. (C.)
Fordyce, A. W. (L.)
Golden, S. S. (L.)
Harry, J. R. (C.)
Jackson, H. (C.)
Johannes, E. W. (C.)
LeBeau, A. A. (L.)
Markson, M. R. (L.)
Miller, T. E. (C.)
Rabkins, M. J. (L.)
Rollins, F. T. (L.)
Salk, R. S. (C.)
Seidner, M. P. (L.)
Sights, W. P. (M.)
Smith, F. M. (L.)
Steffens, J. (C.)
Stutsman, W. H. (C.)
Sweeney, J. S. (M.)
Todd, D. D. (C.)
Wolin, B. M. (L.)
Dixon—Owens, E. B. (M.)
Edwardsville—Barnsback, R. S. (C.)
Evanston—Homel, P. R. (C.)
Huggins, B. H. (L.)
Freeport—Best, F. E. (L.)
Hindsboro—Hopkins, J. J. (C.)

Illiopolis—Willcockson, H. B. (L.)
Joliet—Myers, H. A. (C.)
La Grange—Hillmer, R. E. (L.)
Moline—Youtz, H. L. (C.)
Osceola—Roberts, P. F. (L.)
Pana—Miller, L. H. (L.)
Peoria—McReynolds, A. E. (C.)
Price, W. J. (L.)
Rock Island—Walsh, F. C. (C.)
Rockton—Zwaska, A. B. (L.)
Springfield—Bullard, R. I. (M.)
Evans, F. N. (C.)
Wood, J. T. (L.)

INDIANA

Anderson—Armington, J. C. (L.)
Aurora—Stewart, O. H. (C.)
Boswell—Hubbard, H. H. (M.)
Bryant—Smith, G. A. (C.)
Camden—Wray, B. F. (C.)
East Chicago—Townsley, F. L. (L.)
Elkhart—Bassler, C. R. (L.)
Elwood—Shewalter, G. M. (L.)
Evansville—Willis, J. H. (C.)
Fort Wayne—Berghoff, R. J. (C.)
Johnston, D. D. (C.)
Porter, M. F., Jr. (C.)
Greensburg—Tindall, P. R. (L.)
Hatfield—Glackman, J. C. (M.)
Indianapolis—Beck, F. J. (C.)
Koons, K. M. (L.)
Lochry, R. L. (C.)
Weyerbacher, A. F. (M.)
Jeffersonville—Cohen, D. (C.)
Michigan City—Bowers, J. W. (M.)
Noblesville—Thompson, H. H. (M.)
Plymouth—Knott, H. (M.)
Richmond—Misener, W. L. (C.)
Syracuse—Hoy, C. R. (C.)
Whiteland—Woodcock, C. E. (L.)

IOWA

Albia—Bone, M. (C.)
Belle Plaine—Newland, D. H. (L.)
Boone—Jones, M. C. (C.)
Whitaker, B. T. (L.)
Whitehill, N. M. (C.)
Clinton—Seiler, R. A. (C.)
Davenport—Foley, W. E. (L.)
Des Moines—Givens, M. A. (L.)
Van Meter, J. N. (L.)
Dolliver—Mereness, H. D. (C.)
Fairfield—Clarke, J. F. (L. C.)
Fort Dodge—Acher, A. E. (L.)
Fredericksburg—Reich, L. P. (C.)
Greenfield—Reynolds, E. O. (L.)
Manson—Herrick, T. B. (C.)
Moravia—Harris, W. (L.)
Mystic—Fenton, W. J. (L.)
Waverly—Lott, H. H. (C.)

KANSAS

Anthony—Hawk, B. F. (M.)
Council Grove—Simpson, M. B. (C.)
Emporia—Eckdall, F. A. (C.)
Frederick—Martin, M. C. (C.)
Fredonia—Duncan, E. C. (L.)
Harris—Wilson, H. R. (L.)
Independence—Hudiburg, W. S. (L.)
Kansas City—Lewis, L. C. (M.)
McCracken—Page, W. (L.)
Sterling—Knowles, H. P. (L.)
Topeka—Crabb, J. A. (M.)
Waverly—Boggs, F. C. (C.)
Winfield—Jones, H. H. (L.)

KENTUCKY

Cedarville—Rose, L. (C.)
Clay City—Irvin, R. A. (C.)
Dundee—Stewart, J. D. (L.)
Fount—Rowland, S. H. (L.)
Greenup—Smith, S. C. (M.)
Greenville—Wilson, C. (M.)
Jackson—Bach, L. (L.)
Louisville—Bruner, W. T. (C.)
Crunwald, F. (C.)
Lindenberger, J. (M.)
Lutz, J. S. (C.)
Mount Sterling—Bush, D. H. (L.)
Oakland—White, A. W. (L.)
Versailles—Blackburn, S. A. (C.)
Winchester—Bush, W. A. (C.)

LOUISIANA

Alexandria—Peters, J. I. (L.)
Baton Rouge—McHugh, T. J. (C.)
Elm Grove—Crow, H. L. (L.)
Heflin—Middleton, E. B. (L.)
New Orleans—Nacf, E. F. (L.)
Robin, L. J. (L.)
Rosenthal, J. W. (L.)
Tucker, I. N. (C.)

MAINE

Foxeroft—Hall, C. C. (L.)
Harrington—Burritt, G. L. (L.)
Portland—Burrage, T. J. (L. C.)
Sanford—Cobb, S. A., Jr. (L.)
Waterville—Towne, J. G. (L. C.)

MARYLAND

Anderson—Kimble, F. A. (L.)
Baltimore—Baggott, B. T. (C.)
Burket, W. C. (C.)
Burton, C. H. (L.)
Howard, L. H. (C.)
Hundley, J. M. (L.)
Kritzer, H. R. (L.)
Owensby, N. M. (M.)
Parker, L. M. C. (C.)
Salan, J. (L.)
Speed, J. S. (L.)
Wood, A. H. (L.)
Worrell, C. F. (L.)
Columbus—Roone, A. P. (L. C.)
Cumberland—Wilson, F. M. (C.)
Eckhart Mines—Wilson, G. H. (C.)
Frederick—Crist, G. B. (C.)
Thomas, B. O. (C.)
Jamestown—Bennett, E. M. (L.)
Jarboesville—Crane, J. D. (C.)
Takoma Park—Adams, J. L. (C.)

MASSACHUSETTS

Bluefield—Vass, T. E. (L.)
Boston—Abbe, F. R. (C.)
Adams, D. S. (L.)
Bailey, K. R. (M.)
Brigham, F. G. (C.)
Hamilton, B. E. (C.)
Hubbard, J. C. (L. C.)
Jones, D. F. (C.)
Perkins, H. C. (C.)
Ruggles, E. P. (L.)
Schwartz, G. H. (L.)
Sellards, A. W. (M.)
Stoddard, J. L. (M.)
Taylor, J. H. (L.)
Brockton—Cloudman, H. R. (C.)
Brookline—Harris, C. T. (L.)
Parris, R. O. (L.)
Chicopee—Cowett, M. P. (L.)
Greenfield—MacConnell, D. J. (L.)
Harwich—Miller, P. F. (C.)
Lexington—Tyler, W. M. (C.)
Lowell—Krasnye, J. F. (L.)
Lynn—Darling, A. E. (L.)
Mansfield—Lathan, B. M. (C.)
Newtonville—Howard, P. B. (M.)
Northampton—Perry, H. B. (L. C.)
Palmer—Murphy, J. M. (C.)
Quincy—Hardwick, S. C. (M.)
Southbridge—Tully, G. W. (L.)
Springfield—Strong, J. F. (C.)
Sullivan, E. C. (C.)
Taunton—Fox, W. Y. (C.)

MICHIGAN

Ada—Breece, R. C. (C.)
Adrian—Lochman, M. (C.)
Ann Arbor—Eberbach, C. W. (C.)
Gordon, W. H. (C.)
Battle Creek—Haughey, W. (M.)
Bay City—Baird, S. S. (C.)
Baker, R. H. (L.)
Burr Oak—Kelley, J. J. (C.)
Detroit—Carmichael, E. K. (L.)
Dreyer, A. E. (L.)
Eisman, H. (C.)
Jennings, A. F. (M.)
Jones, M. M. (L.)
Klebba, P. A. (C.)
Kloeppel, C. S. (L.)
McMahon, O. C. (C.)
Pickard, O. W. (C.)
Dundee—Hildebrant, H. R. (L.)
Flint—Winchester, W. H. (M.)
Grand Rapids—Blackburn, H. M. (C.)
Gordon, T. D. (M.)
Manistee—MacMullen, H. (C.)
Ypsilanti—Whitmarsh, T. R. (C.)
Zeeland—Pyle, H. J. (L.)

MINNESOTA

Belgrade—Slocumb, H. H. (C.)
Cokato—Kvello, O. A. (L.)
Duluth—Barney, L. A. (L.)
Jackson—Portmann, U. V. (C.)
Jeffers—Richmond, C. D. (L.)
Le Sueur—McDougald, D. W. (C.)
Minneapolis—Gillespie, P. B. (L.)
Haynes, F. E. (L. C.)
Moir, W. W. (L.)
Soper, J. E. (C.)
Willson, H. S. (M.)
Riverton—Stocking, F. F. (C.)
St. Paul—Cole, W. (M.)
Knapp, F. N. (L.)
Sherper, M. (L.)
Williams, C. K. (C.)
Underwood—Lee, W. A. (L.)
Villard—Girvin, R. B. (C.)
Worthington—Manson, F. M. (C.)

MISSISSIPPI

Aberdeen—Acker, J. M., Jr. (M.)
Booneville—Riley, P. G. (C.)
Brookhaven—Johnson, J. H. (M.)
Cockrum—Moore, D. R. (C.)
Gloster—Cuming, H. T. (L.)
Greenville—Gamble, P. G. (C.)
Hickory—Plummer, J. R. (M.)
Jackson—Rodgers, W. A. (L.)
Logtown—Segura, J. O. (C.)
Meridian—Mosby, C. P. (C.)
Muldon—Dunlap, J. E. (L.)

MISSOURI

Bloomfield—Ashley, H. V. (L.)
Cuba—Martyn, J. H. (L.)
Farmington—Long, F. L. (C.)
Hardin—Elkins, H. A. (L.)
Jamestown—Mayden, C. P. (C.)
Kansas City—Feige, C. A. (L.)
Hallberg, J. W. (L.)
Kimberlin, J. W. (C.)
Raab, F. H. (C.)
Roberts, J. L. (C.)
Slusher, E. W. (M.)
Wilson, C. E. (M.)
Lexington—Ryland, C. T. (L.)
Licking—Rondoll, L. C. (C.)
Ozark—Young, C. W. (L.)
Sedalia—Grove, G. W. (C.)
Springfield—Gifford, A. W. (C.)
St. Joseph—Greenberg, C. (C.)
St. Louis—Gilbert, A. A. (C.)
Gorhem, F. D. (C.)
Hamilton, C. O. (C.)
Kempff, L. A. (C.)
Klippel, B. W. (L.)
Mook, W. H. (L. C.)
Murphy, A. J. (L.)
Tarleton, F. S. (L.)
Taylor, H. I. (C.)
Tierney, J. L. (C.)
Vaughan, J. R. (C.)
Williams, R. S. (C.)
Trenton—Belshe, G. W. (M.)
Warsaw—Logan, J. A. (C.)

MONTANA

Choteau—Bateman, H. W. (C.)
Ekalaka—Baker, G. A. (C.)
Great Falls—Larson, E. M. (M.)
Woods, D. K. (C.)
Outlook—Mangan, L. A. (C.)
Ronan—Rosner, A. K. (L.)
Sykeston—Swartout, E. F. (L.)

NEBRASKA

Atkinson—McKee, N. P. (L.)
Beatrice—Buckley, F. W. (L.)
Butte—Beatty, J. R. (C.)
Callaway—Bryson, R. D. (C.)
Columbus—Evans, J. N. (L.)
Neumarker, W. R. (L. C.)
Exeter—Wegener, K. E. F. (C.)
Hickman—Strough, G. W. (M.)
Lexington—Olsson, J. E. (C.)
Lincoln—Mayhew, J. M. (M.)
North Platte—Selby, C. A. (C.)
Simms, J. S. (L.)
Odell—Thoms, A. N. (L.)
Omaha—Erman, J. M. (L.)
Van Fleet, E. A. (C.)
Wahoo—Weber, E. O. (C.)
Wisner—Riley, W. K. (C.)

NEVADA

Reno—Cunningham, B. F. (M.)

NEW HAMPSHIRE

Gilsum—Williams, H. G. (C.)
Meredith—Borland, A. (L.)

NEW JERSEY

Asbury Park—Wagner, E. C. (C.)
Bridgeton—Sewall, M. F. (M.)
Haddon Heights—Tyler, E. A. (L.)
Hoboken—Reingold, A. (L.)
Jersey City—Chapman, E. J. (L.)
Connolly, J. W. (L.)
Forman, H. S. (C.)
Markowitz, I. (L.)
Long Branch—Wise, L. D. (C.)
Montclair—Seidler, V. B. (C.)
Morristown—Leggett, N. B. (M.)
Newark—Bissell, A. H. (C.)
Horsford, F. C. (C.)
O'Crowley, C. R. (C.)
Walhauser, H. A. (L.)
Paterson—Hagen, O. R. (M.)
Princeton—TenBroeck, C. (L.)
Somerville—Hegeman, R. F. (C.)

NEW MEXICO

Captain—Price, E. C. (L.)
East Las Vegas—Losey, C. S. (C.)
Las Cruces—Lane, B. E. (C.)
Van Huten—Hubbard, L. A. (L.)

NEW YORK

Albany—Bendell, J. L. (C.)
Stapleton, E. A. (C.)
Bronxville—Charlton, H. R. (C.)
Brooklyn—Dooling, J. F. (C.)
Epstein, I. (L.)
Feldman, H. (L.)
Gordon, O. A., Jr. (C.)
Hagan, C. E. (C.)
Heacock, C. H. (C.)
Johnson, J. L. (C.)
Shutter, H. W. (L.)
Buffalo—Betts, J. B. (M.)
DeCeu, R. E. (M.)
DeNiord, R. N. (C.)
Donovan, T. F. (C.)
Gartner, A. A. (C.)
Koenig, E. C. (C.)
McKenney, D. C. (M.)
Moscow, C. (L.)
Southall, E. A. (M.)
Canajoharie—Wheelock, W. E. (L.)
Canastota—Holden, E. C. (L.)
Cobleskill—Beard, J. J. (C.)
Cohoes—Hebert, R. A. (C.)
Delanson—MacDonald, W. F. (L.)
Derby—Brodie, A. K. (C.)
Dexter—Fowler, C. T. (L.)
Dover Plains—Appel, S. E. (L.)
Elmira—Gregory, R. O. (L.)
Freeport—Flanagan, J. T. (M.)
Hastings-on-Hudson—Lyman, F. R. (M.)
Hempstead—Sherman, H. D. (L.)
Hornell—Tracy, W. J. (C.)
Irondequoit—Walker, A. (C.)
Johnstown—Nolan, M. E. (L.)
Larchmont—Smith, E. J. (M.)
Long Island City—Boettiger, C. (M.)
Mencken, H. P. (C.)
Lowville—Culver, C. W. (L.)
New Brighton—Thomas, A. H. (M.)
New Rochelle—Burwell, E. L. (C.)
New York—Allan, J. S. (L.)
Aquaro, J. (C.)
Arluck, S. S. (L.)
Brothers, J. H. (C.)
Buchanan, T. D. (C.)
Burnham, A. C. (L. C.)
D'Alton, C. J. (C.)
Dixon, H. C. (C.)
Downes, W. A. (M.)
DuBois, F. E. (L.)
Edmonds, W. M. (C.)
Everingham, S. (M.)
Felsen, J. (C.)
Goldstone, J. (L.)
Goodhart, A. M. (L.)
Graboff, F. (L.)
Hamaker, C. T. (C.)
Hermann, B. (C.)
Howland, F. (C.)
Johns, L. J. (C.)
Kahn, L. M. (L. C.)
Kellogg, W. A. (C.)
LaRotonda, O. N. (C.)
Lawson, J. H. (C.)
Manning, G. R. (L. C.)
Martin, A. H. (C.)
Mayeroff, J. (L.)
Miles, S. H. (C.)
Rashbaum, M. (L.)
Reymond, R. P. (L.)
Roos, L. L. (C.)
Schwenk, A. C. (L.)
Stout, A. P. (L.)
Turner, P. L. (L.)
Valentine, J. J. (M.)
Van Kleech, E. (L.)
Wright, A. M. (L. C.)
Zulauf, G. W. (C.)
Owego—Capron, J. C. (C.)
Patchogue—Culkin, J. R. (M.)
Richland—Dunbar, A. G. (C.)
Rochester—French, E. A. (C.)
Garlick, F. C. (C.)
Marks, H. E. (L.)
Seymour, F. W. (C.)
Salamanca—Lawler, C. A. (C.)
Saratoga Springs—Vines, E. H. (L.)
Schenectady—Garlock, P. E. (C.)
Gulick, J. D. (C.)
Syracuse—Smith, G. K. (L.)
Tonawanda—Thompson, A. W. (C.)
Wappinger Falls—Blythe, R. P. (C.)
Watertown—Gardner, M. M. (C.)

Westbury—Silliman, G. S. (C.)
White Plains—Mott, W. W. (M.)
Whitestone—Adams, R. A. (L.)
Yonkers—Bell, S. D. (L.)
Flynn, J. J. (L.)
Vogeler, W. J. (M.)

NORTH CAROLINA

Albemarle—Magruder, L. F. (C.)
Charlotte—Rhyne, S. A. (L.)
Merry Hill—Willis, H. C. (C.)
Roanoke Rapids—Patchin, D. F. (L.)
Roxboro—Thaxton, B. A. (L.)
Winston-Salem—Lawrence, C. S. (L. C.)

NORTH DAKOTA

Cogswell—Saylor, H. L. (C.)
Mott—Redman, F. E. (M.)
Rucker, F. T. (C.)
Northwood—Callerstrom, G. W. (C.)
Westby—Norris, J. L. (C.)

OHIO

Akron—Amos, R. E. (L.)
Alliance—Barnard, B. C. (M.)
Ashtabula—Wynkoop, R. B. (C.)
Burkettsville—Sullivan, C. P. (L.)
Chillicothe—Perrin, D. A. (L.)
Cincinnati—Hauser, S. F. (L.)
Savage, W. E. (C.)
Schlemmer, E. W. (L.)
Schriner, L. H. (L.)
Shearer, C. C. (L.)
Smith, P. G. (L.)
Cleveland—Andrews, C. S. (L.)
Gill, W. C. (L. C.)
Grossman, A. B. (L.)
Jones, F. G. (L.)
Thompson, C. W. (C.)
Yoder, I. I. (C.)
Columbus—McCampbell, E. F. (L. C.)
Smith, A. N. (L.)
Fitchville—Bell, C. V. (L.)
Fostoria—Mowry, F. S. (C.)
Huron—Kuhl, A. F. (L.)
Kenton—Protzman, E. S. (C.)
Lancaster—Smith, R. H. (C.)
Linden Heights—Turner, J. A. (L.)
Marion—Rhu, H. S. (L.)
McClure—Boesel, I. H. (C.)
Mt. Vernon—Conard, C. D. (L.)
Newark—Mitchell, L. A. (L.)
Postle, H. H. (C.)
Seaman—Irwin, J. W. (L.)
Toledo—Booth, G. B. (C.)
Brown, T. H. (L.)
Shapire, W. M. (L.)
Washington C. H.—Baughn, H. A. (L.)
Youngstown—Turner, W. B. (M.)
Washburn, J. L. (M.)
Zanesville—Brush, E. R. (M.)

OKLAHOMA

Ada—Akers, G. A. (C.)
Chattanooga—Harned, W. B. (L.)
Collinsville—Callahan, H. W. (L.)
Drumright—Starr, O. W. (L.)
Durant—McKinney, H. W. B. (C.)
Lexington—Northcutt, C. E. (C.)
Mountain View—Bradley, C. E. (C.)
Oklahoma City—McLean, G. D. (C.)
Young, A. M. (C.)
Tulsa—Carleton, L. H. (L.)
Woodward—Tedrowe, C. W. (C.)

OREGON

Eugene—Standard, S. C. (C.)
Hood River—Waugh, J. M. (M.)
La Grande—Bouvy, H. M. (C.)
Vehrs, G. R. (C.)
Oregon City—Mount, F. R. (L. C.)
Portland—Jones, M. J. (M.)
Moore, R. V. (C.)
Scott, W. G. (C.)
Strohm, J. G. (L. C.)

PENNSYLVANIA

Allentown—Blew, E. M. (L.)
Altoona—Alleman, G. E. (C.)
Snyder, J. R. T. (C.)
Beaver—Harrington, F. B. (L.)
Beaver Falls—Sterrett, W. J. (C.)
Bellefonte—Dale, D. (L. C.)
Braddock—Snowwhite, T. H. (C.)
Bristol—Wagner, J. F. (M.)
Butler—Stackpole, R. L. (C.)
Carlisle—Wagoner, P. U. (C.)
Chester—Arnold, C. H. (C.)
Gray, S. P. (C.)
Corapolis—Iland, E. M. (M.)
Donora—Kolinski, J. J. (L.)
Dorranceton — Thompson, L. M. (M.)
Dunmore—Hazlett, A. C. (C.)
Erie—O'Donnell, J. J. (C.)
Freedom—Boal, G. G. (C.)
Galeton—Laye, H. A. (L.)
Greenville—Batteiger, F. O. (C.)
Harrisburg — MacMullen, J. W. (L.)
Hazleton—Buckley, R. E. (C.)
Imperial—Patterson, F. L. (C.)
Jefferson—Kerr, J. C. (C.)
Johnstown—Boyer, E. C. (L.)
Kingston—Shaffer, C. L. (M.)
Lancaster—Davis, H. B. (C.)
Stahr, C. P. (C.)
Lock Haven—Green, G. D. (M.)
Masontown—Messmore, J. L. (C.)
Mayfield—Martin, T. P. (C.)
McKeesport—Goldblatt, L. J. (L.)
Meadville—Poux, G. A. (L.)
Mechanicsburg — Spahr, R. R. (M.)
Media—Kenworthy, J. M. (C.)
Monessen—Hunter, W. D. (C.)
Monongahela—Linn, C. F. (C.)
Newville—McLaughlin, P. W. (C.)
Norristown—Miller, G. W. (M.)
Philadelphia—Abbott, A. C. (Col.)
Alexander, E. G. (M.)
Bachman, H. S. (L.)
Baines, M. C. (C.)
Baumann, F. D. (L.)
Bertolet, J. A. (C.)
Brady, C. (M.)
Broomall, H. S. (C.)
Brush, F. C. (L.)
Budin, D. (L.)
Engle, R. L. (C.)
Fenerty, W. J. (C.)
Ferguson, D. R. (C.)
Fish, H. C. (C.)
Fishback, H. R. (L.)
Goldsmith, N. R. (C.)
Jones, H. S. (L.)
Keenan, A. J. (C.)
Levy, F. D. (L.)
Lewis, C. J. (C.)
MacMurtrie, W. J. (C.)
McCarthy, J. T. (C.)
Musser, J. H., Jr. (M.)
Parrish, R. C. (L.)
Percival, M. F. (C.)
Randall, A. (M.)
Ross, T. (L.)
Siegel, A. E. (L.)
Skillern, S. R. (C.)
Steinmetz, C. G., Jr. (C.)
Pittsburgh—Adams, C. M. (C.)
Baumann, F. C. (C.)
Flood, H. C. (M.)
George, S. (C.)
Hibbs, R. C. (C.)
Lange, W. J. (C.)
Lashay, L. (L.)
Lauer, C. F. (C.)
McFarland, W. W. (L.)
Meredith, E. W. (M.)
Owens, J. R. (C.)
Wagner, A. A. (C.)
Walter, P. H. (C.)
Plymouth—Stiff, W. C. (M.)
Pottsville—McCarthy, M. J. (C.)
Moore, J. J. (M.)
Reading—Bell, T. H. E. (C.)
Rossiter—Preston, W. E. (L.)
Saltsburg—Kaiser, A. J. (L.)
Scranton—Goodfriend, H. (L.)
Kraemer, H. (L.)
Shamokin—Strickland, J. G. (L.)
Somerset—Shaffer, F. B. (C.)
South Bethlehem—Estes, W. L. (C.)
Sunbury—Thomas, C. M. (C.)
Swissvalle—Wagener, C. K. (C.)
Tamaqua—Fleming, A. B. (C.)
Temple—Bauscher, A. H. (C.)
Tower City—Hawk, D. J. (C.)
Tremont—Murphy, J. T. (C.)
Uniontown—McHugh, W. A. (C.)
Robinson, G. H. (C.)
Washington—Prowitt, H. P. (C.)
Sargent, L. D. (C.)
Wilkes-Barre—Bixby, E. W. (C.)
Wilkinsburg—Markell, W. O. (C.)
Williamsport—Pryor, C. A. (L.)

RHODE ISLAND

Auburn—Warren, C. F. (L.)
Providence—Burrows, E. A. (C.)
Corvese, A. (C.)

SOUTH CAROLINA

Anderson—Thompson, W. (L.)
Bamberg—Weekley, A. S. (L.)
Blacksburg—Little, A. L. (C.)
Chester—Moore, B. S. (C.)
Columbia—Fisburne, S. B. (C.)
Greenville—Wallace, J. M. (L.)
White, W. E. (L.)
Honea Path—Williams, J. W. (L.)
Lake City—Eaddy, J. D. (L.)
Summerville—Carroll, F. J. (C.)
Timmonsville—Foster, R. K. (C.)
Walterboro—Goodwin, C. I. (L.)

SOUTH DAKOTA

Deadwood—Ashcroft, F. E. (M.)
Lead—Fehliman, W. E. (C.)
Vermilion—Stansbury, E. M. (C.)

TENNESSEE

Polivar—Miller, V. H. (M.)
Capleville—Latimer, R. G. (C.)
Cedar Hill—Barnes, M. W. (C.)
Centerville—Edwards, W. K. (C.)
Chattanooga—Barrett, S. H. (L.)
Hartsville—Blankenship, F. M. (L.)
Hillsboro—McCaleb, W. L. (L.)
Jackson—Arnold, B. C. (C.)
Knoxville — McCampbell, H. H. (C.)
Memphis—Brown, C. W. (L.)
Bry, M. E. (L.)
Chapman, L. H. (L.)
Murfreesboro — Lunsford, W. B. (L.)
Nashville—Erwin, A. L. (L.)
Woodring, T. V. (L.)
Oakland—Payne, C. (L.)

TEXAS

Amarillo—Gist, R. D. (C.)
Childress—Wolford, R. B. (C.)
Crowell—Clark, H. (M.)
Cuero—Trible, J. M. (C.)
El Paso—Carpenter, E. R. (C.)
Galveston—Smith, B. F. (C.)
Georgetown—Carter, D. W., Jr. (L.)
Hillsboro—Haggard, C. H. (C.)
Houston—Buchanan, C. C. (L.)
Myra—Roberts, A. L. (C.)
Palestine—Cockerham, L. H. (L.)
San Benito—Vinsant, W. J. (C.)
Santa Anna—Sealy, T. R. (C.)
Sulphur Springs—Pickett, H. W. (M.)
Terrell—Woolsey, H. U. (L.)
Tyler—Cain, W. R. (C.)

UTAH

Bingham Canyon — Bruckheimer, R. M. (L.)
Salt Lake City—Brain, C. E. (C.)
Whitlock, W. A. (C.)

VERMONT

Burlington—Jackson, H. N. (M.)
Middlebury—Ross, J. J. (C.)
St. Johnsbury — Tierney, J. P. (L.)
Sudbury—Colby, B. D. (L.)

VIRGINIA

City Point—Wyatt, H. L. (C.)
Columbia—Nelson, J. J. (C.)
Danville—Wiseman, H. A. (C.)
Lynchburg—Devine, J. W. (L.)
Norfolk—Anderson, J. W. (C.)
North Tazewell — Witten, J. W. (C.)
Portsmouth—Pendleton, W. (C.)
Richlands—Ratliff, J. M. (L.)
Richmond—Boisseau, J. G. (M.)
Hooker, R. C. (L.)
Roanoke—Wolff, C. O. (L.)

WASHINGTON

North Yakima — Helton, A. J. (M.)
Seattle—Beeler, G. W. (C.)
Thompson, H. B. (C.)
Tacoma—Edards, H. J. (L.)
Steagall, J. R. (C.)

WEST VIRGINIA

Harvey—Bolton, H. H., Jr. (L.)
Minnehaha Springs — Lockridge, R. B. (L.)
St. Marys—Grimm, H. W. (L.)

WISCONSIN

Ashland—Rohow, F. M. (L.)
Athens—Winnemann, W. J. (L.)
Beaver Dam—Webb, E. P. (C.)
Black River Falls—Thompson, R. D. (C.)
Cazenovia—Doctor, W. R. (C.)
Green Bay—Gosin, F. J. (C.)
Mueller, W. E. (C.)
Hartford—Buckley, W. E. (L.)
Hayward—Ballard, J. A. (C.)
Kenosha—Jorgensen, P. (C.)
Lancaster—Doolittle, S. W. (C.)
Madison—Cooksey, R. T. (L.)
Eyster, J. A. E. (M.)
Mendota—Lorenz, W. F. (M.)
Milwaukee—Campbell, R. M. (L.)
Farnham, C. R. (C.)
Frew, J. W. (L. C.)
Weber, A. J. (L.)
Oconto—Watkins, W. C. (M.)
Oshkosh—Combs, C. J. (M.)
Sparta—Scantleton, J. M. (C.)
Stanley—Erickson, H. C. (C.)
Washburn—Trowbridge, P. T. (C.)
Watertown—Abelman, T. C. H. (L.)
West Allis—Willett, T. (M.)

WYOMING

New Castle—Horton, F. L. (L.)
Powell—Lewellen, J. D. (L.)

ORDERS TO OFFICERS OF THE MEDICAL CORPS, U. S. ARMY

On account of lack of space, due to publication of proceedings of the Annual Session, "Orders to Medical Officers" are omitted in this issue.

Birth Statistics.—The U. S. Census Bureau's preliminary report for 1917 shows that in the birth registration area of the United States 1,353,792 infants were born alive in 1917, representing a birth rate of 24.6 per thousand of population. The total number of deaths in the same area was 776,222 or 14.1 per thousand. The births exceeded the deaths by 74.4 per cent. For every state in the registration area, for practically all the cities and for nearly all the counties, the births exceeded the deaths, in most cases by considerable proportions. The mortality rate for infants under 1 year of age averaged 93.8 per thousand living births. The birth rate for the entire birth registration area fell below that for 1916 by two-tenths of one per thousand population, but the death rate was less by six-tenths of one per thousand than in 1916. Thus the excess of the birth rate over the death rate for 1917, which amounted to 10.5 per thousand, was somewhat greater than the corresponding excess for 1916, 10.1 per thousand, although it fell slightly below that for 1915, 10.9 per thousand. If the birth and death rates prevailing in any one of these three years were to remain unchanged, and if no migration were to take place to or from the area to which they relate, its population would increase at the rate of slightly more than 1 per cent. per annum, or a little more than 10 per cent. in a decade. This would be about half the rate, 21 per cent., by which the entire population of the United States increased between 1900 and 1910.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

ALASKA

Influenza Epidemic.—Influenza in most serious form is reported to be epidemic in Alaska. The Bristol Bay section is most seriously involved. The epidemic appears to be attacking both whites and natives with a high percentage of mortality. In one small settlement sixty deaths are said to have been reported in one day. The ships of the Pacific Squadron of the Navy, and the Coast Guard Service have been given hurried orders to proceed to Alaska with additional medical officers and hospital corps men.

CALIFORNIA

Personal.—Dr. Ray Lyman Wilbur, president of Leland Stanford University, has been elected president of the California State Conference of Social Agencies. President Wilbur has always taken particular interest in the sociological problems connected with diseases, and brings to his new duties a wide practical experience and a splendid record of past accomplishments.——Henry S. Kiersted, M. C., U. S. Army, Burlingame, was elected surgeon of the California Commandary Military Order of Foreign Wars of the United States at its meeting for organization at San Francisco, May 8.

DISTRICT OF COLUMBIA

Senate Committee on Public Health.—The membership of the full Senate Committee on Public Health and National Quarantine has been announced. The members are Senator Joseph I. France, Maryland, chairman; Senator Charles E. Townsend, Michigan; Senator Joseph S. Frelinghuysen, New Jersey; Senator Boies Penrose, Pennsylvania; Senator Warren G. Harding, Ohio; Senator L. Heisler Ball, Delaware; Senator Joseph E. Ransdell, Louisiana; Senator Duncan U. Fletcher, Florida; Senator Robert L. Owen, Oklahoma; Senator Oscar W. Underwood, Alabama; Senator William J. Harris, Georgia. The first six are Republicans and the last five Democrats. Strange as it may seem, the House of Representatives has no committee on public health, medical bills being referred to a number of committees, largely to military affairs and the judiciary committee. It is to be hoped that the medical profession will insist that a committee to act on medical legislation matters be named by the House at no far distant date.

ILLINOIS

Personal.—Dr. William M. Hanna, Aurora, has been elected medical director of the Grand Army of the Republic for Illinois.——Dr. Irving H. Neece, Palmyra, assistant surgeon, U. S. P. H. S., has been appointed health officer of Decatur.

Drugs at Great Lakes.—Joseph W. Robinson, said recently to have been an enlisted man at Great Lakes was arrested, June 14, while carrying a cigar box containing nearly $1,000 worth of cocain and opium. It is believed that the arrest of Robinson may be the link needed for solving the mystery in a number of "dope cases" which occurred at the U. S. Naval Training Station, in April.

Chicago

Personal.—Norman M. MacNeill, Capt., C. A. M. C., formerly resident physician at St. Joseph's Hospital, has been appointed adjutant of the Granville Canadian Hospital at Buxton, Derbyshire, England.——S. N. Trockey, Capt., M. C., U. S. Army, has returned after service with the British Forces in France.

Alumni Elect Officers.—At the annual meeting of the Northwestern University Medical Alumni Association held in Chicago, June 16, under the presidency of Samuel C. Stanton, Major, M. C., U. S. Army, the following officers were elected: president, Dr. William E. Quine, '69; secretary, Dr. Alexander A. Goldsmith, '01; and necrologist, Samuel C. Stanton, Major, M. C., U. S. Army, '92. On the mornings of June 16 and 17, instead of the usual clinic week, addresses were delivered to the Alumni at the school, by members of the faculty and alumni who had been in war service.

INDIANA

Tuberculosis Hospital Items.—New buildings are to be erected at Sunnyside, the Marion County Tuberculosis Hospital. There is to be a cottage for tuberculous children and a service building with kitchen, dining room and workshops. It is also hoped to erect soon a cottage for incipient cases with a capacity for twenty patients. The buildings will have all the latest improvements for the treatment of tuberculous patients. Dr. Harry S. Hatch, the superintendent, says that the needs are urgent for the better care of tuberculous children, as the work in checking tuberculosis is more effective among children than with the more advanced cases among adults.——The Indiana State Tuberculosis Hospital, Rockville, has been renamed the Indiana State Sanitarium. Dr. Amos Carter of Plainfield was chosen for superintendent, succeeding Dr. Raymond B. T. Sweany.

IOWA

Personal.—Dr. Harold L. Beye, assistant professor of surgery at the State University of Iowa, Iowa City, who has been on duty with the American Expeditionary Forces in France and who was gassed, has been released from the hospital and has returned home.——Dr. Alford J. Farnham, Traer, has been elected president, and Dr. Percy L. Parsons, Traer, secretary, of Tama County Medical Association.

New Health Laws.—A housing law has just been passed in Iowa. The law proposes minimum specifications for future building in cities of 15,000 population or over; also the reconstruction or rehabilitation of tenements or dwelling houses; the control of yard space, air space in living and sleeping quarters and other regulations tending toward the preservation of health of the people. This law is primarily a health measure which connotes economic and social welfare. Another law authorizes boards of supervisors, city and town councils, and boards of education to employ public health nurses. A venereal disease bill was passed and an appropriation of $15,000 made for the education of people on venereal diseases and their control. The government appropriates dollar for dollar, making an additional $15,000 for this work. The campaign against tuberculosis is admitted to have contributed no small influence to the passage of this legislation.

MARYLAND

Hospital Overcrowded.—Because of the abandonment of the hospitals for wounded soldiers at Cape May, N. J., and at St. Louis, whose patients are to be transferred to U. S. Army General Hospital No. 2, Fort McHenry, the capacity of that hospital will be taxed to its utmost, as there are already about 2,000 patients under treatment at the fort. About 1,000 men are expected from the two discarded hospitals.

Hospital Site Chosen.—A site adjacent to the Eudowood Sanatorium, Towson, has been selected for the new state tuberculosis sanatorium for negroes. The selection was made by the board of managers of the State Tuberculosis Sanatorium, Sabillasville. The last legislature appropriated a total of $75,000 for the sanatorium, of which $50,000 is available during the current fiscal year and $25,000 during the next. There will be about $50,000 left after the purchase of the land and this will be used to build first units of the hospital.

Personal.—Charles M. Remsen, Major, M. C., U. S. Army, Baltimore, who sailed for France last August and was connected with Evacuation Hospital No. 2 during the fighting in the Argonne region, has been promoted to the rank of lieutenant-colonel, and is now with the army of occupation at Coblenz.——Dr. William Kelso White, Baltimore, who for the past year has served overseas with the Medical Corps, U. S. Army, has returned and is now stationed at Camp Dix, N. J., awaiting discharge.——Dr. Henry A. Naylor, Pikesville, who served with the rank of captain in the Medical Corps, Sixtieth Pioneer Division, has received his discharge.

MASSACHUSETTS

Division of Public Health.—The Massachusetts State Department of Health announces the creation within the division of hygiene of a subdivision of public health nursing. Included in this subdivision will be the nurse health instructors of the division of hygiene.

Lawrence Establishes a Community Welfare Council.—May 14, the health and social agencies of Lawrence, united to form a community welfare council with the president of the

chamber of commerce as chairman. The council intends to coordinate the work of the established organizations and to serve as a committee to develop the public health work of the city.

New England Child Welfare Conference.—At Boston, May 15 and 16, the New England Conference on Child Welfare was successful in bringing together from all the New England States about one thousand representatives of organizations devoted wholly or partly to children's work. This is one of the series of regional conferences on child welfare which have been arranged by Miss Julia Lathrop, Chief of the Federal Children's Bureau, to take place in different sections throughout the United States. The exchange of ideas and experience among English, Belgian, French, Japanese, Italian, Servian and American delegates is giving added strength to public opinion in favor of the efforts of child welfare organizations.

NEW YORK

Special Meeting on Narcotic Situation.—As a result of a petition of members of the Medical Society of the County of New York, a special meeting of the society has been called for June 23 to discuss the narcotic drug situation, especially with reference to the amendment to the sanitary code proposed by the commissioner of health.

Personal.—Charles S. Little, Capt., M. C., U. S. Army, superintendent of Letchworth Village, has returned from France, and on his discharge will resume his former position. ——Dr. Erick H. G. Restin, Liberty, has been appointed medical superintendent of Rockland County Tuberculosis Hospital.——Dr. Robert H. Irish, Troy, has been selected as head of the Tuberculosis Dispensary and the Visiting Nurse Service of Troy.

Victory Meeting of Buffalo Alumni.—The forty-fourth annual meeting of the Alumni Association of the Medical Department of the University of Buffalo was held in Buffalo, June 19 to 21, under the presidency of Dr. William F. Jacobs, Buffalo. The first day there was a symposium on war medicine and surgery by members of Base Hospital No. 23. In the evening class reunions were held. On the second day the alumni oration in medicine, on "Facts and Theory in Practice," was delivered by Dr. Frederick Peterson of New York City, and the fraternity reunions were held. On the third day of the meeting, the alumni victory dinner was given in the banquet hall of the Hotel Statler.

Narcotic Pledge by Bay Ridge Physicians.—At the regular meeting of the Bay Ridge Medical Society, June 5, a resolution was adopted whereby the members pledged themselves to try in every possible and reasonable way to cure addicts and alcoholic inebriates and pledged themselves not to prescribe drugs or alcoholic liquors merely for the purpose of satisfying a craving therefor. The establishment by the government of hospitals for the treatment of alcoholic and drug addicts was also recommended. The society approved a contribution of $5,000 toward the proposed Victory Memorial Hospital, Bay Ridge, which is to cost $100,000 and is to be erected as a tribute to the service men of Bay Ridge, living and dead, and the following officers were elected: Dr. Rollin Hills, president; Dr. Joseph W. Malone, vice president; Dr. James W. Fox, secretary, and Dr. John J. Masterson, treasurer.

New York City

Osteomyelitis Service.—A special service for the treatment of osteomyelitis is being conducted at U. S. Embarkation Hospital No. 4, 345 West Fiftieth Street, under the direction of Dr. Pedro Chutro, formerly director of the Hospital Buffon, Paris, and George W. Hawley, Lieut.-Col., M. C., U. S. Army. Lectures and demonstrations are given daily, except Saturdays, from 2 to 4; ward dressings daily from 9 to 11 a. m.; and operations are performed every Monday, Wednesday and Friday at 10 a. m.

OHIO

Venereal Disease Cases Reported.—Figures given out by the state health department, June 9, showed that the enforcement of the regulations requiring physicians to report to the department all cases of venereal disease in their practice are producing results. During the months of April and May, 1,693 venereal disease cases were reported, while during the corresponding period last year there were 626 reports of the disease.

Personal.—Fred Fletcher, Major, M. C., U. S. Army, Columbus, has been promoted to the rank of lieutenant-colonel, and is in charge of Base Hospital No. 38, at Nantes, France.——Dr. W. N. Unkeefer, Piqua, underwent an operation at the Memorial Hospital, June 3, and is reported to be doing well.——John D. O'Brien, Lieut.-Col., M. C., U. S. Army, Canton, chief of the medical services at LeMans, France, returned home, May 31.——Dr. Edward D. Allgaier, Cincinnati, has been appointed surgeon to the eye, ear, nose and throat service of St. Francis Hospital, succeeding Dr. John Ranly, deceased.

OREGON

Damages Against Physicians.—In a suit brought by Fred Barton against Drs. Ralph C. Matson and Ray W. Matson, Portland, in which $20,000 damages were asked on account of serious injury alleged to have resulted from leaving of a drainage tube in the lung, the plaintiff, May 28, is said to have been awarded $2,000 damages.

University of Oregon News.—The seventh annual meeting of the Alumni Association of the Medical Department of the University of Oregon will be held in Portland, June 23 to 25, immediately preceding the meeting of the Oregon State Medical Association, which is to be held June 26 to 28. From June 30 to July 10, the faculty of the university will give postgraduate courses for which a small fee will be charged.

PENNSYLVANIA

Personal.—Henry M. Thissell, Lieut., M. C., U. S. Army, Philadelphia, Pennsylvania Reserve Militia, has been relieved from active service and transferred to the supernumerary list.——Dr. Alphus W. Gregg, Kennett Square, was acquitted, June 4, of charges of improper medical treatment preferred by William and Anna Scott.

Philadelphia

Personal.—Surg.-Gen. L. Melis of the Belgian army, Prof. Jules Deusberg and Dr. Pierre Nolf, all of whom are from Liege, Belgium, were guests of the City Club at luncheon, June 7.

Medical Club Reception.—The Medical Club of Philadelphia gave a reception, on the evening of June 18, at the Bellevue-Stratford Hotel, in honor of Senator Robert L. Owen, Oklahoma, and the foreign delegates to the American Medical Association.

Hahnemann to Admit Women Students.—For the first time in seventy-one years women will be admitted to Hahnemann Medical College according to the announcements of Dr. Henry M. Eberhard, member of the faculty, and the admission of women to the institution will be made possible through the gift of $40,000 by W. E. Hering, whose father, Dr. Constantin Hering, was one of the founders of the college. This substantial fund was added to the Hering foundation funds and the interest on this additional endowment will be used for both men and women who could not otherwise afford a medical education. Living expenses as well as tuition will be provided by this fund.

TEXAS

Personal.—Dr. Dabney Berrey, San Antonio, has been appointed health officer of Bexar County.——Dr. Henry B. Decherd, Dallas, has been elected vice president of the University Club, Dallas.——Dr. Alden Coffey, Fort Worth, suffered severe bruises in an automobile collision, June 5.

North Texas Physicians Hold Meeting.—At the seventeenth semiannual meeting of the North Texas Medical Association held in Dallas, June 4, Fort Worth was selected as the next place of meeting and the following officers were reelected: president, Hugh Leslie Moore, Dallas, for the eighteenth term; vice president, Dr. Sidney J. Wilson, Fort Worth, secretary, Dr. David L. Bettison, Dallas, and treasurer, Dr. Martin L. Wilbanks, Greenville.

Health Department to Be Reorganized.—Complete reorganization of the health department of Dallas was authorized, May 16, at the session of the board of city commissioners, when ordinances were approved creating a board of hospitals and a board of health, and designating its duties. In the hospital board, which will consist of the mayor and nine members, there will be a superintendent of hospitals and a superintendent of emergency and home service. The health board, which consists of the mayor and twelve members, will conduct the work of the director of public health, and will be directly in charge of four branches of the city health office, namely, the city health officer, city sanitarian, city chemist and city registrar. Drs. Thomas J. Crowe, Joseph W. Bourland, Calvin R. Hannah, L. V. Lataste and Albert A. Jackson,

Mexia, who resigned from the original board of health, have been reappointed members of the board of hospitals together with Dr. William C. Swain, and three laymen. The board of health consists of Drs. John W. Embree, Samuel M. Freedman, John G. McLaurin, Oscar M. Marchman, J. J. Simmons, all of Dallas, and six laymen.

WASHINGTON

Personal.—Dr. Ernest F. Pope, Spokane, who returned to America from France, in April, is under treatment in the Peter Bent Brigham Hospital for thrombosis following pneumonia.——The charges of alleged misconduct made against Dr. Ralph Hendricks, city health officer of Spokane, have been investigated and have been found not to have been sustained.——Dr. Andrew M. Flynn, Tacoma, was held up and robbed in front of his residence, May 4.——Dr. Charles E. Eaton, Seattle, has been discharged from the Army after two years' service and has resumed practice.——William L. McClure, Major, M. C., U. S. Army, North Yakima, on duty in France, has been promoted to the rank of lieutenant-colonel.

WISCONSIN

New Officers.—At the annual meeting of the Wisconsin Surgical Association held in Milwaukee, May 8, Dr. William C. F. Witte, Milwaukee, was elected president; Dr. Karl W. Doege, Marshfield, vice president, and Dr. Daniel Hopkinson, Milwaukee, secretary-treasurer.

Personal.—Dr. John G. Barnsdale, Superior, convicted of violating the antinarcotic act, and denied further hearing, was taken by United States Marshall to Fort Leavenworth, June 11, where, in addition to a three year term in the penitentiary, he has been sentenced to pay a fine of $6,000.

WYOMING

New Hospital.—The new hospital for Laramie County, to be erected at Cheyenne, is to be known as the Frances Pershing Memorial Hospital in accordance with a contribution of $25,000 toward its cost to be made by Senator Francis E. Warren and Fred E. Warren. The hospital will cost $200,000, $75,000 of which is to be raised by the sale of the hospital bond issue and the remaining $100,000 by a special tax levy. Work on the building, which will occupy a portion of the grounds of the present Laramie County Hospital, will be commenced as soon as plans can be completed.

CANADA

Ontario Government to Manufacture Arsphenamin.—The Ontario Board of Health has been advised that the federal government at Ottawa has approved of its application to manufacture and sell arsphenamin. Dr. John W. S. McCullough, Toronto, chief officer of health for Ontario, claims that this privilege will be of the greatest importance in combating syphilis in Ontario.

Centers for Research in Ontario.—Hospital superintendents from Ontario met recently in Toronto at the call of the provincial secretary under whose department the hospitals of the province are administered. The efficiency and standing of these public institutions were discussed, and it is now the intention of the department to rebuild and staff those hospitals which were depleted of regular scientific help during war time. One of the largest and finest of these institutions, the one at Whitby, was handed over to the Department of Militia and Defense early in the war period; and the Central Prison at Guelph was also made use of as a convalescent hospital for returned soldiers. The Whitby institution will revert to the department at the end of June, and it is planned further to improve this institution and make it one of the finest hospitals for mentally afflicted in the world. In each hospital district of the province a medical center will be located.

GENERAL

President Wilson Congratulates New President of Association.—In recognition of the recent election of Surgeon-General William C. Braisted to the Presidency of the American Medical Association, President Wilson on June 17 cabled to him from Paris his personal congratulations.

Appropriation for Study of Influenza.—The Committee on Scientific Research of the American Medical Association has made an appropriation for the preparation of a critical summary of the epidemiology and bacteriology of the influenza pandemic. The work has been placed in charge of Prof. Edwin O. Jordan of the University of Chicago. It is requested that reprints of articles and statistical records on influenza be forwarded to Professor Jordan as soon as published.

Bequests and Donations.—The following bequests and donations have recently been announced:

Loomis Sanatorium, Saranac Lake, N. Y., $10,000, Association for Improving the Conditions of the Poor, New York City and Monmouth, N. J., Memorial Hospital, each $5,000 by the will of Mrs. Henrietta Kingsland.

To endow the Jane Dowst Emergency Hospital, Waukegan, Ill., $150,000, on the death of his sister, by the will of Charles Dowst, Waukegan.

Health Education Legislation.—"Health extension education" is provided for in a measure introduced by Senator Sheppard of Texas. The work would be directed by the U. S. Bureau of Education and the Public Health Service. A general work of education of civic and public health nature is to be conducted in all states accepting the service and a federal appropriation of $10,000 is provided for each state. The work would be carried on through the extension departments of the state universities. The purpose of the measure is to "establish and promote civic, social and health extension education."

Increase in Drug Addicts.—The special investigating committee of the Treasury Department in its final report, submitted, June 13, states that the nation-wide use of narcotic drugs for other than legitimate medical purposes has been steadily increasing in the United States during the last four years, despite vigorous efforts in the enforcement of the federal law; the number of drug addicts in the United States is estimated to be in excess of 1,000,000, and that imports of opium products and coca leaves into the United States have increased twice as rapidly as the growth of population.

Division of Tuberculosis Under Public Health Service.—The creation of a division of tuberculosis in the Public Health Service is provided for in a bill introduced by Senator Ransdell of Tennessee. The bureau is to be in charge of an assistant surgeon-general. The duties of the bureau are "to study tuberculosis and its causes and prevention and to demonstrate methods for its suppression." The establishment of an advisory council on tuberculosis is provided. The council is to consist of "ten competent men selected because of their special knowledge relating to public health," appointed by the Surgeon-General of the Public Health Service. Two members are to be retired each year. Their compensation would be $10 per diem and expenses. The Hygienic Laboratory Advisory Board, created by the act of July 1, 1902, would be abolished by the bill.

More Social Hygiene Appropriations.—The United States Interdepartmental Social Hygiene Board announces appropriations from its scientific research fund to the following institutions for the purpose of investigating "more effective medical measures in the prevention and treatment of venereal diseases":

University of Nebraska College of Medicine: (*a*) Investigation relative to the development of an internal urinary antiseptic. (*b*) Investigation of the value of certain anilin dyes in the treatment of gonorrhea. Both under the direction of E. G. Davis, M.D., director of pathological laboratory.

St. Louis University College of Medicine: Studies in infection by gonococci. Under the direction of Ralph A. Kinsella, M.D., director of department of experimental medicine.

Woman's Medical College of Pennsylvania: A serologic study of syphilis in pregnant women and new-born children with special reference to the efficacy of the accepted methods of syphilitic treatment. Under the direction of Bertha M. Meine, M.D., director of research department.

Washington University School of Medicine: The laboratory (biologic) investigation of the latent syphilitic as a carrier. Under the direction of Martin F. Engman, M.D., professor of dermatology, St. Louis.

Cornell University Medical College: Serologic study of the gonococcus group. Under the direction of John C. Torrey, Ph.D., professor of hygiene.

Jefferson Medical College of Philadelphia: A series of studies for the recognition and diagnosis of *Spirochaeta pallida* in venereal diseases and the effect of various drugs and materials as germicidal agents against *Spirochaeta pallida*. Under the direction of Randle C. Rosenberger, M.D., professor of hygiene and bacteriology.

FOREIGN

Infant Welfare Clinics in Greece.—The American Red Cross has established a number of infant welfare clinics in Greece where many young women of the highest classes of Greece are instructed in infant welfare, trained as nurses' aids, and are given clinical demonstration as to how children should be treated.

Protection of Students in Dissections and Laboratory Work.—A Spanish medical student, F. Simon, died last March

from infection acquired in the class of practical anatomy at the University of Madrid. His father has recently founded an endowment of 12,500 pesetas the income of which is to be expended in protecting medical students against the dangers inherent in dissecting work, in laboratory research, and in aiding at operations.

Organization of Spanish Medical Association.—Among the conclusions voted at the First National Medical Congress, held at Madrid in May, was the organization of the Asociación Médica Española. As there was no opportunity for discussion of constitution and by-laws, a draft closely following the constitution and by-laws of the British Medical Association was adopted temporarily. The medical congress and its annex proved a great success for the first attempt at a national gathering of the kind in Spain. The lay attendance at the exhibition was surprisingly large.

Medical School in China Opens.—The Peking Union Medical College, Peking, China, which has been built under the direction of the Rockefeller Foundation, will open for the instruction of students in October, 1919. The college will give a four years' course in medicine and an additional year of special work in hospitals or in laboratories. The school will be coeducational. There is also a premedical school offering a three years' course preparatory to admission to the medical school. This premedical school was opened in September, 1917.

Prize for Work on Radiology.—The French Society for Medical Radiology founded an annual prize of 300 francs for the best article on some radiologic subject presented in competition. The war interrupted the custom but the society now announces that the prize will be awarded this year, and states that all competing articles must be in the hands of the secretary before Oct. 1, 1919. Address Dr. Haret, rue Pierre-Haret, 8, Paris IX. Full details in regard to the prize offer were given in the *Bulletins de la Société de Radiologie*, March, 1914, p. 112. Five copies of the article must be presented.

Deaths in the Profession Abroad.—Dr. **A. Lecha-Marzo,** professor of legal medicine at the University of Sevilla, Spain, aged 31. At the age of 18 he published an article on hemochromogen crystals as a means of identifying blood, and later communications on dactyloscopy and on the tear sign of actual death carried his name far and wide.——The *Nederlandsch Tijdschrift* mentions the death of **Bernhard S. Schultze,** honorary professor of obstetrics and gynecology at the University of Jena, aged 91. He published his paper on the swinging method of artificial respiration for the newly born in 1866.

CORRECTION

Sterility of Catgut.—In the article on this subject published in THE JOURNAL, June 14, page 1736, the names of the authors should be C. T. Butterfield and Leo F. Ey.

MEXICO LETTER

MEXICO CITY, MEXICO, June 8, 1919.

Association of Medical Students

The medical students have formed an association to work for the intellectual, moral and physical progress of the whole class. The inauguration of the society took place with ceremonies, at which the president of the university and the dean of the school of medicine presided. At the same meeting, honorary diplomas were distributed among the medical students who had obtained them during the school year of 1917.

The Army Medical Board

By direction of the army and navy departments there has been organized a commission composed of army physicians of different rank, for the purpose of studying and proposing reforms that may be necessary in the sanitary service of the army. Dr. J. J. Sánchez, former professor of anatomy in the school of medicine, is the president of this commission.

The Study of Typhus

The University of Harvard has informed the University of Mexico, that provided the required facilities are available, Dr. S. B. Wolbach, professor of bacteriology at Harvard, will come to this country in the near future to make a study on the etiology of the tabardillo (typhus). President Macías answered by telegram that Dr. Wolbach will be most welcome, that all possible aid will be given to him, and that his trip is timely, as there are various questions relating to typhus remaining unsolved, as can be seen from the papers presented at the congress on this disease held here last January. It may be well to remember that about ten years ago, Dr. H. T. Ricketts came to Mexico for purposes similar to those of the Harvard bacteriologist, which unfortunately he could not carry out because of his having contracted the disease and died shortly afterward. Mexico has not been ungrateful towards this martyr of science: one of the laboratories of the *Instituto Bacteriologico Nacional* has in a prominent place on its walls the portrait and the name of this American physician as a tribute to his memory.

Generous Legacy

Information has just been received by the government that Sr. Alberto Parres, who died in Paris and was believed to have left no will, bequeathed $3,000,000 to private benevolent institutions. Sr. Parres was on a pleasure trip in Europe when he died.

Public Poisoning

It has been ascertained that in the city of Saltillo some unscrupulous persons were making bread and pastry dyed with chromate of lead instead of yolks of eggs; other manufacturers were coloring their products with saffron. The first have been prosecuted as poisoners, while the latter will be just fined.

Interest in the English Language

It is remarkable the increasing interest in the English language in Mexico. Three of the newspapers with the largest circulation are written in both Spanish and English; another one in French and English.

BUENOS AIRES LETTER

BUENOS AIRES, May 5, 1919.

New Outbreak of Influenza

In one of the concentration zones for navy recruits located in the harbor of this capital and very near the Immigration Barracks, there has been observed during the last months an outbreak of influenza of short duration but rather serious, for in some days there were more than 200 cases and six deaths. When the concentration of the naval recruits took place, several outbreaks of influenza occurred in different military zones, especially in the province of Entre Ríos, but they are now on the decline and the mortality has always been very low. In different places (Santiago del Estero, Corrientes, Goya, La Banda, etc.) there have been outbreaks which, while affecting a large portion of the inhabitants, have never assumed much seriousness.

Anthrax

For the last two or three years there has been a notable increase of anthrax in rural sections all over the country. Several official and private organizations have advised the compulsory antianthracic vaccination for animals. At present vaccination is voluntary on the part of the owners. There has also been recommended the appointment of an official controller of vaccination, and a commission studied the matter but without reaching definite conclusions.

Bubonic Plague

After the disappearance of the outbreak of bubonic plague at Salta and Jujuy there have occurred some cases at the railway station at Los Cisnes of the province of Córdoba and also on one of the railway lines that have terminals at the port of Buenos Aires, but both outbreaks have now ceased.

Entrance Examinations to the School of Medicine

The School of Medicine has so many first year students (800) that some measures were needed to limit this excessive number as neither the buildings nor the teaching equipment was sufficient. The staff deemed it, therefore, necessary to require an entrance examination that would permit a selection of the best applicants and decrease somewhat the number of the students. It is authorized to that effect by the law of organization of national universities, but the new students thought they could obtain the revocation of the measure by going on a strike. The board of directors of the School of Medicine would not change its attitude, which received the unanimous support of the students. The movement of the new applicants therefore failed and the entrance examinations remained in force. The dean of the school, Dr. Julio Méndez, who was elected by the students themselves, disapproving of the entrance examinations, when he saw that the students were supporting the board of directors, presented his resignation which was accepted. New elections will therefore be held in the near future to fill the positions of dean and also of a director.

University Appointments

There have been appointed the following professors: Of surgical clinics. Dr. J. Arce; of gynecology, Dr. J. F. Molinari; of pediatrics, M. Acuña; of anatomy, Dr. C. Jakob; of organic chemistry (pharmaceutical), Dr. P. J. Mesigos. Dr. Arce, in his opening address, stated that it is the intention to establish a complete institute of surgical clinics with a research laboratory, etc. In accordance with the new regulations, a number of the substitute professors have commenced to give complete courses which the school considers as valid as those given by the regular professors. A number of other professors have also been authorized to give *cursos libres* (optional courses).

Death of Dr. Penna

Dr. José Penna, the leader in most of the work done in this country against infectious diseases and in charge of the most important sanitary campaigns, and professor of infectious diseases in the School of Medicine, has died suddenly. For nearly forty years no important work was done in public health without his cooperation. He directed and organized the Department of Public Assistance of Buenos Aires and the National Department of Public Health, in which he carried to a satisfactory conclusion the organization of the Bacteriological Laboratory commenced by Dr. Malbrán. Professor Penna published a number of articles on clinical medicine and had an exceptional experience in the diagnosis of infectious diseases.

LONDON LETTER

LONDON, May 28, 1919.

Vital Statistics

Although a considerable decline is recorded in the rate of the mortality in England and Wales during the first three months of this year, as compared with the last quarter of 1918, deaths again exceeded births, the natural decrease of population being 47,002, against 79,443 in October, November and December. The birth rate was unprecedentedly low, representing an annual rate of only 15.6 per thousand of the population. Influenza was either a primary or a contributory cause of death in no fewer than 37,697, or nearly 20 per cent., of the total deaths registered last quarter. Infant mortality, measured by the proportion of deaths under 1 year of age to registered births, was equal to 149 per thousand, being 31 per thousand above the average in the corresponding period of the last ten years.

Smallpox in England and Wales

The danger of the introduction of smallpox into this country by soldiers returning from abroad, which has been apprehended, has been realized. About 100 cases have occurred in England and Wales, including about a dozen in London. The infected soldiers passed through demobilization camps while incubating the disease, and generally the first symptoms were manifested on reaching their homes. On account of the modification produced by infantile vaccination, the nature of the disease was not recognized until it spread to others, especially to unvaccinated persons (of whom, as shown in previous letters, there are large numbers in this country in consequence of the neglect of vaccination). In some cases the disease was introduced by sailors and other persons returning from Portugal, where it is prevalent.

Defective Training of Physicians in Ophthalmology

A report on the teaching and examination of medical students in ophthalmology, issued by the Council of British Ophthalmologists, emphasizes the need of adequate training, particularly in view of the unfavorable position held by Great Britain compared with France, Switzerland, Spain, the United States and many other countries. An analysis of the existing regulations concerning the teaching and examination in ophthalmology in the United Kingdom and abroad shows that Great Britain stands almost alone in granting diplomas to practice medicine without evidence of an adequate knowledge of diseases of the eye. There are still three examining bodies that have not even adopted the recommendation of the General Medical Council of 1891 which requires a certificate of attendance at a three months' clinical course. Moreover, at other institutions the interpretation of what is meant by a three months' course varies greatly and should be more accurately defined, as it is by all the American universities. In Great Britain only a small minority of the licensing bodies apply regularly a test of ophthalmic knowledge. In Ireland and in the great majority of foreign universities, ophthalmology is one of the subjects of the qualifying examinations, and the examiners are invariably ophthalmic surgeons. The knowledge of ophthalmology possessed by the majority of medical students in Great Britain at the time of their qualification is inadequate to enable them to diagnose and treat efficiently cases of ordinary eye diseases encountered in general practice. The council holds that it is desirable that the training in ophthalmology should be mainly clinical, and agrees that a period of three months is all that can be allotted to the subject in a five years' curriculum. The council recommends, therefore, (1) that attendance at an ophthalmic clinic for not less than six hours a week during a period of three months shall be required of every student, and (2) that such a period of clinical training shall be supplemented by a course of systematic lecture or clinical classes. A serious defect is the absence of any test of the student's knowledge of ophthalmology in the qualifying examinations. Teachers in the medical schools are well aware that without the stimulus of an examination, many students give the least possible attention to ophthalmology and may, and often do, finish their training without gaining even a rudimentary knowledge of the subject. In the opinion of the council, it is most desirable that an examination in ophthalmology should be made an integral part of the qualifying examination by all those licensing bodies that have not heretofore included it in their schedule.

The council recommends that: (1) No student shall be admitted to the final examination qualifying to practice in medicine, unless he has attended an ophthalmic clinic for not less than six hours a week during a period of three months and has attended a course of systematic instruction in ophthalmology, and (2) no student shall be considered to have passed the qualifying examination unless he has shown a sound knowledge of practical ophthalmology in an examination conducted by ophthalmic surgeons.

CUBA LETTER

HAVANA, May 27, 1919.

New Hospitals and Asylums

The Department of Charities has dedicated a new building in the town of Guanabacoa destined to give shelter to the aged and destitute.

The Grand Masonic Lodge of Cuba will also soon open an asylum for old people called "La Misericordia." The corner stone of the last building of this institution was laid May 20, Cuban Independence Day.

Güines, a town of about 25,000, in the province of Havana, is building a new hospital to cost $100,000.

The Association of the natives of the Canary Islands has purchased the site for their hospital. It will have a beautiful location on the road from Havana to Bejucal.

Plans for Better Dwellings

The old *bohío*, the traditional country dwelling of the Cuban peasant, will, for sanitary and hygienic reasons, soon be a thing of the past. The *bohío* is a small frame dwelling built level with the ground and has a roof of palm leaves and a dirt floor. It has no sanitary conveniences whatever, and usually consists of only one room, in which the family lives, sleeps, cooks and—dances. The Board of Health of the Republic has invited architects to present plans and estimates for the construction of comfortable and sanitary dwellings for the country population, and has offered a prize of $500 for the best plans.

Personal

Drs. Orosman Lopez, Y. Clark and C. Yarini have been appointed professors at the Dental School, University of Havana. Dr. J. A. Hernandez Ybañez has been appointed assistant in physiology at the University of Havana Medical School.

Requisites for Acceptance of Foreign Diplomas by the Cuban Authorities

Heretofore any physician in possession of a medical diploma has been permitted to practice in the Republic of Cuba after passing an examination and paying the appointed fees. A bill just passed by the House of Representatives will impose certain restrictions and conditions on foreign medical graduates. They will have to prove the authenticity of their diplomas, since counterfeits have been quite common. They must also pass an examination in every subject of the curriculum of the medical school. There are thus nearly thirty different subjects in which the applicant must pass. Failure in any one of them deprives him of any further trials.

Marriages

ALFORD EDWARDS BUDDE, Capt., M. C., U. S. Army, North Chicago, Ill., on duty in London, England, to Miss Madeleine de Colnet d'Huart of Bayswater, London, April 16.

HERBERT L. WILBUR, Capt., M. C., U. S. Army, Granby, Mo., to Miss Cora B. Scott of Washington, Ind., June 8.

LESLEY TRACY GAGER, Stonington, Conn., to Miss Josephine Willoughby Chapman of Towson, Md., June 15.

EDWARD MONTGOMERY DUNCAN, Govans, Md., to Miss Clara May Owens of Norwalk, Conn., June 2.

FRANK THOMAS FORT, Louisville, Ky., to Miss Elizabeth Odele Brown, at Baltimore, June 4.

FRANK W. MORLEY to Miss Florence Sneider, both of Toledo, Ohio, May 27.

ELMER LEONARD MERTZ to Miss Hazel L. Cooper, both of Rockford, Ill., June 7.

Deaths

Victor Clarence Vaughan, Jr. ⊕ **Major, M. C., U. S. Army,** Detroit; University of Michigan, Ann Arbor, 1902; aged 39; on duty with the American Expeditionary Forces in France; was accidently drowned in France, June 10. Major Vaughan was associate professor of preventive medicine and assistant professor of medicine in the Detroit College of Medicine and Surgery; a specialist in internal medicine, at one time was health officer of Detroit, and was a member of the American Association of Pathology and Bacteriology.

Edward Kent Armstrong ⊕ Chicago; Dearborn Medical College, Chicago, 1904; University of Illinois, Chicago, 1905; Northwestern University Medical School, Chicago, 1910; aged 38; a specialist in pediatrics; superintendent of the Municipal Contagious Disease Hospital of Cook County, 1917, who had served in France since April, 1918, and was later assigned to duty in Palestine where he was engaged in repatriation work; is reported to have been killed recently in an automobile accident.

Lewis Merritt Palmer ⊕ Framingham, Mass.; Harvard Medical School, 1881; aged 68; a specialist on diseases of the ear, nose and throat; medical examiner (coroner) for the eighth Middlesex district since 1902; surgeon to the Framingham Hospital, and the Reformatory for Women; trustee of the Massachusetts Training School, and treasurer of the Massachusetts Medico-Legal Society; died at his home, June 4, from angina pectoris.

Warren Schoonover ⊕ New York City; College of Physicians and Surgeons in the City of New York, 1867; aged 81; house physician, secretary and a member of the board of managers of the Northeastern Dispensary since 1873; a member of the American Academy of Medicine and American Public Health Association; died in the Broad Street Hospital, New York City, June 3, after an operation for the removal of an abdominal growth.

Mgrditch Simbad Gabriel ⊕ New York City; Central Turkey Medical College, Aintab, 1881; aged 62; professor of practice of medicine in his alma mater in 1885 and 1886; since that date a practitioner of New York City; president of the Armenian General Progressive Asociation; author of several works on Armenia; editor of an Armenian magazine; died in the North Hudson Hospital, Weehawken, N. J., June 3.

Edward E. Lindeman ⊕ New York City; Johns Hopkins University, Baltimore, 1908; aged 39; formerly acting assistant surgeon, U. S. P. H. and M. H. Service; a fellow of the New York Academy of Medicine; an authority on the transfusion of blood; who was in attendance at the meeting of the American Medical Association in Atlantic City; was accidentally drowned, June 12, while bathing.

Caroline V. Wiley Anderson, Philadelphia; Woman's Medical College of Pennsylvania, Philadelphia, 1878; aged 70; one of the foremost negro physicians of Philadelphia; for many years in charge of the medical department of the twenty-ninth ward and vice president of the Berean Manuel Training School; died at her home, June 3, from cerebral hemorrhage.

⊕ Indicates "Fellow" of the American Medical Association.

Adolph Brand, New York City; College of Physicians and Surgeons in the City of New York, 1904; aged 40; a specialist in dermatology; a member of the American Urological Society and New York Academy of Medicine; dermatologist to the Hospital for Deformities and Joint Diseases; chief dermatologist to St. Bartholomew's Clinic, and assistant dermatologist to Bellevue Hospital; died at his home, June 2.

Arthur Howard McCray, Lieut., U. S. N. R. F., Helena, Mont.; George Washington University, Washington, D. C., 1915; aged 38; state bacteriologist of Montana; who contracted Rocky Mountain spotted fever from an inoculated guinea-pig, June 5; died in a hospital in Helena, June 15, from the disease.

Philander S. Root ⊕ Monroe, Mich.; Detroit Medical College, 1881; aged 63; president of the Monroe County Medical Society in 1913, and secretary in 1917; local surgeon of the Lake Shore and Michigan Southern Railroad; also a banker and newspaper publisher; died at his home, June 6, from heart disease.

Denman Rathbun Kinsell, Jr., Columbus, Ohio; Ohio Medical University, Columbus, 1898; aged 57; a member of the Ohio State Medical Association; a member of the associate staff of the Lawrence Hospital, Columbus, and of the American Electro-Therapeutic Association; died at his home, June 3.

William Elzie Terry, Long Beach, Miss.; Kentucky School of Medicine, Louisville, 1897; aged 49; a member of the Mississippi State Medical Association; while returning from a professional call and driving over a grade crossing near Long Beach, May 15, was struck by a train and instantly killed.

Clarence F. Barker, Okenama, Mich., formerly of Chicago; Hahnemann Medical College, Chicago, 1880; aged 67; for twenty years professor of surgery in his alma mater; died in Milwaukee, June 7, from shock following the amputation of a leg, on account of diabetic gangrene.

Henry Clay Day, Bennington, Vt.; College of Physicians and Surgeons in the City of New York, 1870; aged 74; for twenty-five years a druggist of Bennington; a member of the village board of trustees, and school trustee; died at his home, May 26, from acute gastritis.

Oscar Fitzallan Swasey, Beverley, Mass.; Bowdoin Medical School, Brunswick and Portland, Me., 1853; aged 92; a member of the Massachusetts Medical Society; for several years town physician and a member of the staff of Beverly Hospital; died at his home, June 4.

Samuel Smith Shields, Carbondale, Pa.; Medical College of Georgia, Augusta, 1873; aged 71; for many years chief of staff of the Carbondale Emergency Hospital; a fellow of the American Academy of Railway Surgeons; died at his home, May 30, from heart disease.

Elisha D. Beard, Brownsburg, Ind.; Medical College of Indiana, Indianapolis, 1893; aged 52; for fifteen years a practitioner of Indianapolis; while driving his car over a grade crossing near Avon, Ind., May 1, was struck by a fast train and instantly killed.

William M. Floyd ⊕ Henderson, Ky.; University of Louisville, Ky., 1891; aged 52; a specialist on diseases of the eye, ear, nose and throat; once president of the Henderson County Medical Society; died at his home, May 17, after an operation for appendicitis.

Freeman Dodd Bosworth, Coolidge Corner, Mass.; Harvard Medical School, 1906; aged 43; examining physician for the Boston Society for the Care of Girls; one of the founders of Lancaster Hospital, Brookline; died in that institution, June 2.

John G. Brennen, New York City; College of Physicians and Surgeons, Baltimore, 1914; aged 33; a graduate of Columbia University College of Pharmacy in 1905; died in the Manhattan State Hospital, May 16, from general paralysis.

Frederick Kendall Brown ⊕ Philadelphia; Jefferson Medical College, 1890; Medico-Chirurgical College of Philadelphia, 1896; aged 54; assistant ophthalmologist to the Pennsylvania Hospital Dispensary; died at his home, May 31.

Thomas H. Monahan, Salt Lake City; Minneapolis College of Physicians and Surgeons, 1886; aged 51; formerly in charge of the Northern Minnesota Hospital, Crosby; died at his home, recently, from cerebral hemorrhage.

William Parker Mercer, Elm City, N. C.; New York University, New York City, 1879; aged 64; for two terms state senator from Edgecomb County; died at his home, May 28.

William Hoyt, Hillsboro, Ohio; Cleveland University of Medicine and Surgery, 1867; aged 79; a veteran of the Civil War; medical director of the Department of Ohio, G. A. R., in 1903; died at his home, May 31.

William E. Courson, Beulah, Miss.; Southern Medical College, Atlanta, Ga., 1884; aged 55; a practitioner since 1882; who went to California about six months ago for his health; died in Alhambra, Calif., May 22.

J. O. Wharton, Waverly, Ind.; Indiana Medical College, Indianapolis, 1877; aged 67; died in Martinsville, Ind., April 13, from injuries to the chest received in an automobile accident five months before.

Woods Frederick Derr ✠ Williamsport, Pa.; Johns Hopkins University, Baltimore, 1915; aged 29; a specialist in surgery; died at the home of his parents in Watsontown, Pa., May 27, from tuberculosis.

John Henry Thompson, New York City; New York Medical College, New York City, 1853; aged 84; surgeon of U. S. Volunteers during the Civil War; died at his home, June 7, from arteriosclerosis.

Michael J. Griffith, Washington, D. C.; Georgetown University, Washington, 1869; aged 79; a veteran of the Civil War; deputy registrar of wills for forty-three years; died at his home, May 25.

Charles Biddle Bush ✠ Philadelphia; Jefferson Medical College, 1885; aged 59; a specialist on diseases of the eye, ear, nose and throat; died in the Orthopedic Hospital, Philadelphia, May 27.

Henry C. Dimond, Philadelphia; University of Pennsylvania, Philadelphia, 1881; aged 63; formerly secretary of the Clark County (Ohio) Medical Society; died at his home, January 4.

Edward B. Schwartz, Buffalo; University of Buffalo, N. Y., 1881; aged 52; consultant to the City Hospital for Women, Buffalo; a musician and linguist of talent; died at his home, May 23.

William Herbert Beasley, Sheppard, Texas; New Orleans School of Medicine, 1867; aged 81; a member of the State Medical Association of Texas; died at his home, May 18.

Charles P. King, Newark, Ohio; Jefferson Medical College, 1867; aged 78; died at St. Anthony's Hospital, Columbus, Ohio, May 28, from cerebral hemorrhage.

George Robert Spooner, Worcester, Mass.; Hahnemann Medical College, Philadelphia, 1870; aged 72; a veteran of the Civil War; died at his home, May 24.

Jacob C. Knowles, Seaford, Del.; College of Physicians and Surgeons, Baltimore, 1897; aged 53; died at his home, May 23, from carcinoma of the liver.

James Calvin Stem, Goldsboro, Pa.; Cincinnati College of Medicine and Surgery, 1878; aged 64; died in York, Pa., May 18, from cerebral hemorrhage.

Thomas Benton Brooks, Lynch, Ky.; Kentucky University, Louisville, 1903; aged 49; died at the home of his wife's parents in Valley, Ky., May 20.

John C. Dalton, Pasadena, Calif.; Starling Medical College, Columbus, Ohio, 1874; aged 69; died at his home, May 19, from arteriosclerosis.

Stephen L. Strickler, Boggstown, Ind.; Eclectic Medical Institute, Cincinnati, 1879; aged 65; died at his home, May 23, from cerebral hemorrhage.

Solomon Lewin, Chicago; Ensworth Medical College, St. Joseph, Mo., 1892; aged 62; died in Los Angeles, May 24, from aneurysm of the aorta.

Clarence C. Bullard, Opelika, Ala.; Georgia College of Eclectic Medicine and Surgery, Atlanta, 1891; aged 55; died at his home, June 1.

Charles E. Angell, Delphi, Ind.; Jefferson Medical College, 1883; aged 68; died at his home, May 15, from cerebral hemorrhage.

Bertha Emma Zahn, Bascom, Ohio; Ohio Medical University, Columbus, 1898; aged 48; died at her home, about May 24.

Joseph B. Eversole, Adeline, Ill.; Rush Medical College, 1866; aged 86; died at the Ogle County Home, Ore., May 24.

J. Allen Harrison, Philadelphia; Hahnemann Medical College, 1892; aged 46; died at his home, May 25, from influenza.

Perry C. Johnson, Lakeland, Fla.; Eclectic Medical Institute, Cincinnati, 1889; died recently at his home.

Edward D. Hope, Macon, Ga.; Atlanta (Ga.) Medical College, 1891; aged 58; died at his home, May 18.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

MORE MISBRANDED NOSTRUMS

Samaritan Nervine.—Shipped about January, 1913, by the Dr. S. A. Richmond Nervine Co., St. Joseph, Mo. Analysis showed the preparation to contain nearly 19 per cent. of potassium bromid, with indications of atropin. Falsely and fraudulently represented as a specific for epilepsy, seminal weakness, every form of kidney disorder, pulmonary affections, rheumatism, gout and heart disease, and as a cure for scrofula, syphilis, loss of hearing and paralysis. Fine, $45 and costs, imposed Sept. 18, 1917.—[*Notice of Judgment No. 6309; issued May 10, 1919.*]

Phenol Sodique.[1]—Shipped about July, 1915, by Hance Bros. & White, Philadelphia. Falsely and misleadingly claimed to be non-poisonous, when in fact it contained phenol (carbolic acid), and to be effective as a disinfectant when used according to directions, when as a matter of fact placing the product in shallow vessels or sprinkling a solution of it about the apartment would not disinfect impure and unhealthy localities or prevent the spread of yellow fever, typhoid fever, scarlet fever, cholera, etc. It was declared misbranded also, in that it contained no ingredients or combination of ingredients which would cure catarrh, erysipelas, piles, sprains, ulcers and various other ailments mentioned in or on the trade package. In June, 1918, Hance Bros. & White consented to a decree, and judgment of condemnation and forfeiture was entered. On the order of the court the product was delivered to the company on the payment of the costs and execution of a bond.—[*Notice of Judgment No. 6313; issued May 10, 1919.*]

Nuxcara.—Shipped about April, 1916, by Reuben B. Kelley, president of the Nuxcara Mfg. Co., Atlanta, Ga. Analysis showed the product to contain over 11 per cent. of alcohol, together with cascara, strychnin and berberin, and small quantities of other vegetable material. Falsely and fraudulently represented as a positive remedy for indigestion, dyspepsia, catarrh, bronchitis, rheumatism, neuralgia, etc., and as a cure for kidney and liver trouble, chronic appendicitis, etc. Fine, $25, imposed November, 1918.—[*Notice of Judgment No. 6340; issued May 10, 1919.*]

Dr. A. Upham's Valuable Electuary.—Shipped about October, 1916, by John Green Hall and Augustus Steele Hall, copartners, trading as J. G. & A. S. Hall, Oxford, N. C. Analysis showed the preparation to be a tablet composed essentially of cream of tartar, potassium nitrate, resins, sugar, sulphur, gum and vegetable extractives. Falsely and fraudulently represented as an infallible remedy for internal, external, blind and bleeding piles, and as a remedy for all affections of the bowels, liver complaint, dyspepsia, etc. It was also fraudulently represented as a remedy for paralysis, apoplexy and measles, and as a cure for tumors, inflammation of the stomach, kidneys, etc. Fine, $100 and costs, imposed June, 1918.—[*Notice of Judgment No. 6349; issued May 10, 1919.*]

1. A report of the Council of Pharmacy and Chemistry on "Phenol Sodique" was published in this department of THE JOURNAL, Nov. 9, 1907. The Council declared that the claims made at that time for Phenol Sodique were "unscrupulous" and "a positive menace to the public health."

Malaria.—Malaria is derived from two Italian words, *Mal* and *Aria*, which mean bad air. The record of malaria reaches back to Hippocrates, who lived 400 years before Christ. Hippocrates divides the disease into the "every-day chills" and the "every-other-day chills."—*Malaria Circular,* North Carolina Board of Health.

Correspondence

"THE GOLDENROD AND 'HAY-FEVER'"

To the Editor:—I have read with approval and interest the defense of goldenrod as a cause of hay-fever in THE JOURNAL, May 31, by my distinguished confrère, Dr. John Noland Mackenzie of Johns Hopkins University.

As an old practitioner of otolaryngology I have seen the various nostrum serums, infusions, etc., "have their day and cease to be," and have noted "how fast does system follow system from sunlight to the sunless land."

It was in 1891 that I first developed well-marked hay-fever, while on a visit to Manitou Springs, Colo., of more than 6,500 feet elevation, at the foot of Pike's Peak, where the commonly believed pollens of hay-fever are not found. I was then practicing medicine in Kansas City, and up to that time had only a supersensitive schneiderian membrane, sneezing frequently, under varying conditions of slight nasal irritation, changes from heat to cold, sunlight, etc. I spent several weeks in Manitou, afflicted with typical nasal hay-fever, and went on to California and up to British Columbia, remaining about two weeks, during which time all symptoms disappeared. But I had no sooner come into the high lands of Wyoming on my way home, when all the old symptoms returned, and they continued annually ever since from mid August to near October 1, though through all the year I am as of old more or less subject to sneezing on slight provocation. During my "season" I dare not use any applications, for even the mildest and most "soothing" seem to set up irritation. Menthol has always been very irritating. During the year 1893 I was in London, engaged in the study of my specialty, and returned to America, September 1, landing at New York. I had no symptoms until I reached Washington, D. C., a few days later.

About five years ago I spent the summer, until September 1, on the Mississippi Sound at Pass Christian. I started to St. Louis the last day of August, and felt no distress until I arrived in Memphis next day. During the summer of 1918 I was major chief of the Head Section of Base Hospital, Camp Beauregard, La. This camp is in the center of the state, 192 miles northwest of New Orleans. The Red River cuts across the county in which the camp was located, from East to West, and marks sharply the north line of the sugar belt. North of the river are high hills clad with pines, oaks and most of the indigenous trees of the South or Central states. Below the river the topography is as different as if one were in two different countries. There we had vast flat lands covered with cotton, cane, corn, with swamp forests and low lands adjacent. There is no flora growing in and around St. Louis that does not flourish in this section; and, as might be imagined, there are many varieties that are not found in the uniformly high lands around St. Louis; yet I had not even a sniff of hay-fever during my incumbency at this camp.

About fifteen years ago, Dunbar, whose serum nostrum has had so much advertising and patronage with the profession, visited St. Louis. The otolaryngologists were celebrating him, for his star was at that time in the ascendent. No one cared to say anything critical of the distinguished professor. Among his adulators was an otolaryngologist of St. Louis, well known throughout America. It was then late August in the midst of the hay-fever season. At the special meeting of the local society, which Dunbar addressed, this otolaryngologist hazarded the statement that he was then treating twenty cases of hay-fever with Dunbar's serum, with complete or partial relief to nineteen. I do not quote this as intending to be critical, but I have often felt an amused desire to ask how many cases he is curing now. Having a suburban home, it happened that the day of this meeting I had some high blue-grass pasturage cut, the grass, of course, being mixed with goldenrod, ragweed and all the rest of the indicted flora. I wanted to present myself before Dunbar as a "horrible example," so I went out and wallowed in the new mown hay, then plucked a fresh sprig of "the bride of the autumn sun," and none the worse, presented myself at the meeting and told Dunbar and his adulators that his remedy was based on assumption and empiricism.

Dr. Mackenzie well says that "the true character of this remarkable disorder is still elusive, baffling and far off. Through the uncertain and changing atmosphere which surrounds it we as yet see dimly." The mystery of this most mysterious disease! Rational, considering men who are not swept from their mental moorings by preconceived desire and ephemeral circumstance, or brow-beaten by inconclusive hypothesis, say to each other, as did the intellectual Iago: "Virtue! a fig! 'tis in ourselves that we are thus or thus"; or as did the far-visioned Hamlet: "There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy."

FAYETTE C. EWING, M.D., St. Louis.

COMFORT AND COLD

To the Editor:—It is a never-ceasing source of wonder that certain fundamental principles are so slowly grasped by the human mind. The article of Major Head (THE JOURNAL, May 3, 1919, p. 1268) is an admirable example of the misunderstanding of fresh air treatment of pneumonia, and Major Head is particularly to be commended for his frank statement of the case. The results as shown should have been expected, and it is hoped that the conclusions that he draws will be indelibly limned on the minds of the medical profession with the cause accentuated so that such errors may never again be repeated.

Those who have been accustomed to the use of the fresh air treatment of tuberculosis and pneumonia will agree that the fundamental truth to be insisted on is that the patient shall never be uncomfortable; that discomfort is incompatible with rest; that shivering is nature's method of fighting discomfort and raising temperature; that depression is to be avoided at all times; that it is quite possible to be in the cold and yet not be cold; that if the patient is uncomfortable it is due to his not being properly taken care of — that some minor technic has been overlooked by the nurse, and that the nurse is in a majority of cases the one responsible for failure. I myself have found this so much to be the case that I regard the comfort of the nurse, and attention to her clothing, shoes and surroundings as the first things to provide, after which I could expect her to take care of the patient; but if the nurse is uncomfortable I should count on the patient's being neglected.

The requirements are so simple that sufficient stress has not been laid on them. Outdoor treatment has not been carried out in its entirety even in sanatoriums where such treatment should have been familiar. I have known of hospitals where the climate was expected to be cold so constructed and outfitted that cold weather caught them unprepared for just such emergencies.

If patients are properly protected below the mattress as well as above, the pillows properly arranged, proper nightcaps supplied, and bed socks and shields prepared, they can stand almost any climatic change with comfort — their bodies in the climate of Florida while their noses may be in the arctic regions. As Major Head says, "The skins must be red, not blue; they must be warm, not cold." Only cold will beat down their fever, stimulate their hearts, and supply them with unprebreathed air. Breathed or exhausted air can produce no more heat than the ashes of coal or wood. Rain, fog and excessive breeze should all be deflected; and as to the windows and doors, that is a matter of orientation and architecture that varies in every case.

The vision of my old, French-Canadian guide rising ruddy and refreshed from his bed of spruce between the heavy logs that he had cut for himself, and shaking off the 3 inches of snow that had fallen in the night, while I could hardly venture from my heated tent, comes before me. He had taken care with the logs on each side and at the head and foot to cut off the entrance of air to his body; while, he being wrapped in his blanket and his cap pulled down, the rising vapor of his breath kept an open chimney through the snow to the outer air. Eighty years of life in the open had taught him the value of fresh air.

If there is one principle that was demonstrated by the mass of statistics in the War of the Rebellion, it was that the old campaigner who knew how to take care of himself in a tent withstood his pneumonia better than in the closed ward of the hospital, while the raw recruit who did not know how to keep himself warm suffered.

The architecture of our camp hospitals has improved very much since those days, and the proper ideas of ventilation have been widely accepted.

But bearing in mind the principles outlined above of the absolute comfort of the patient being the essential thing, plus the unprebreathed, undeoxygenated air, much that seems strange in Major Head's statistics would be explained.

J. CLINTON FOLTZ, M.D., Chestnut Hill, Philadelphia.

"SEROLOGIC CURE (?) IN THE LIGHT OF INCREASINGLY SENSITIVE WASSERMANN TESTS"

To the Editor:—In THE JOURNAL (May 24, 1919, p. 1526) Wile and Hasley discredit the Wassermann as a therapeutic guide, saying: "As a guide to therapeusis the Wassermann reaction does not have a leg to stand on. We stand today with regard to the treatment and cure of syphilis as did the syphilologists of the pre-Wassermann day." To these statements I cannot subscribe, and I wish to point out wherein Wile and Hasley appear to me to be in error. They have attempted to draw a parallel between the Wassermann reaction and the tuberculin test. This adds nothing to the force of their argument because: First, it has never been proved that in the presence of a positive tuberculin test there are not living tubercle bacilli; and, second, as stated, we do not know the exact mechanism of the Wassermann reaction. We do know, however, that with certain well known exceptions, the Wassermann reaction is diagnostic of syphilis. In other words, we know that, with these exceptions, it never occurs in a person who has not at some time harbored living spirochetes.

Most syphilologists and serologists will admit that the Wassermann test performed with ice-box incubation is more delicate in detecting the "Wassermann bodies," both in untreated and in treated patients. This does not mean *a priori* that because it is more delicate the test is not an indication of living spirochetes, which we know must be present to produce it in the first place. And even Wile and Hasley admit, and show by their statistics, that the Wassermann test as carried out by the ice-box incubation method is sometimes completely negatived by treatment (over 15 per cent. of their cases, as against 50 per cent. by the older method). Furthermore, because the ice-box incubation creates a more delicate test than the water-bath incubation, it does not follow that eventually a technic will be developed which will be so delicate as to detect all persons who have ever had syphilis, regardless of whether or not a cure has been accomplished.

We know that certain of our patients whom formerly, by the older methods of performing the Wassermann test, we considered as probably cured have come back to us in one or more years with positive tests. Wile and Hasley have not shown that cases in which the ice-box Wassermann test was negatived eventually, by treatment, become positive. But even if this does occur, and I think it probable, why should we tell these patients that they are cured, provided, of course, a clinical cure exists, when we have evidence of a positive test which we know never exists without at least a previous active syphilis?

There are certain cases which are "Wassermann fast." The discovery of more of this type of case by the ice-box method is merely an indication that we are getting fewer complete cures than we formerly thought we were, and that these patients should all be treated as syphilitics, receiving courses of treatment periodically throughout their lives.

In so-called primary syphilis the Wassermann test never becomes positive on account of the treatment the patient receives. If treatment will keep a patient from developing a positive Wassermann test which, in untreated cases, is an indication of the presence of living spirochetes, and we assume the syphilis has been cured in such patients, a constantly negative test following treatment of a patient who formerly had a positive test is an indication of cure. It is, in fact, the only indication, except, of course, a clinical cure.

Until it can be shown that a person who has been completely sterilized of spirochetes (and who can prove that this has occurred?) still gives a positive Wassermann, a positive Wassermann test, no matter how delicate, is an indication of the probable presence of living spirochetes, and the patient should be treated on these grounds.

As far as I know, no syphilologist ever relied on a negative Wassermann test alone as a cure for syphilis, but insisted on a clinical cure also, or, perhaps better, insisted on a clinical cure plus a negative Wassermann. Instead of being no better off than the syphilologists of the pre-Wassermann day, we are infinitely better off, particularly since the work of Wile and Hasley has shown us that the Wassermann test performed by the ice-box incubation is more delicate in detecting the "Wassermann bodies" following intensive therapy than were the older methods. In other words, we are going to keep more uncured syphilitics under treatment, or at least under close surveillance than we formerly did.

LOYD THOMPSON, M.D., Hot Springs, Ark.

PREVENTION OF RELAPSES IN CASES OF ARRESTED TUBERCULOSIS

To the Editor:—Since the publication of my article on the "Prevention of Relapses in Cases of Arrested Tuberculosis Among Soldiers" (THE JOURNAL, Feb. 22, 1919, p. 539), I have delivered addresses on this subject on a lecture tour extending from the Atlantic to the Pacific. I received many suggestions and criticisms in the discussions which followed the reading of my paper as well as in letters. I desire to reply to the most important criticism, which is in reference to respiratory exercises.

The thought was expressed by a number that respiratory exercises would stimulate the tuberculous process to greater activity. Another criticism was to the effect that a mistake might be made by the less experienced clinician in declaring a case arrested when in reality it was still active. To these criticisms I would reply that I was not prescribing respiratory exercises for the tuberculous patient, but for the cured individual whose tuberculous process had been arrested. But I failed to point out in my lecture the inestimable advantage to be gained by letting the patient take gradual breathing exercises before allowing him to resume physical labor of any kind. Relapses occur frequently in certain cases in which the physical examination does not reveal any activity and there are no symptoms. The patient is pronounced an arrested case and allowed to leave the sanatorium. Yet he relapses after a few days or a week of physical labor. I believe we have all made mistakes in allowing patients to go to work too soon. But now, instead of telling the patient to go to work as soon as all the active symptoms have quieted down and only the physical signs of an arrested case remain, I start gradual breathing exercises and the patient is examined frequently, so as to determine whether or not an activity is reawakened. After from four to six weeks' preparation by massage, hydrotherapy, and respiratory therapy, when frequent examinations do not reveal any renewed activity, we may be reasonably certain that the disease is sufficiently arrested to allow the patient to resume physical labor with safety.

As long as the patient is on the reclining chair, he breathes but little and very quietly. Any physical exertion or labor will accelerate the respiratory movements, and it would seem unwise to allow his respiratory system to be submitted brusquely to so great a change as is inevitable when the patient begins to do physical labor which cannot be regulated, particularly when he is away from the sanatorium. Even for graded labor, which is of inestimable advantage, the careful preparation by breathing exercises is a valuable and safe procedure, because the patient can begin very slowly while yet on the reclining chair.

S. ADOLPHUS KNOPF, M.D., New York.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

REQUIREMENT AS TO HOSPITAL RECORD UNDER HARRISON LAW

To the Editor —Please render an opinion on the following matter: A and B are regularly licensed physicians patronizing the same hospital. A contends that each time he instructs a nurse to give a hospital patient a hypodermic injection of morphin, or any other drug coming under the Harrison Narcotic Act, he should leave not only a written and signed order but should place after his signature his registration number. B says that it is unnecessary to add the registration number to the signature each time.

W. B. T., Texas.

ANSWER.—According to Internal Revenue Regulations No. 35, regarding hospital records, "No special form of record is required, but it (the record) must enable an inspecting officer to quickly ascertain the quantity and kind of narcotic drugs used and show the names and addresses of patients to whom administered and indicate the authority for such administration. The initials of a physician giving directions for the administration of a narcotic should appear on the chart of the patient, or separate prescriptions should be required by the pharmacist in charge of the drug room before the narcotics leave his possession." From this ruling it would appear that it is optional with hospitals whether they require each order for hypodermics to be initialed by the physician or separate prescriptions to be written for file in the drug room. If the first plan is followed, the initials of the physician are sufficient. His full signature and registration number are not necessary. If the second plan is followed, then the prescriptions must show the name and address of the patient, the date and name and address of the physician, and his registry number.

DECORATIONS THAT MAY BE WORN BY THOSE ENGAGED IN THE PRESENT WAR

To the Editor:—With the exception of medals bestowed for acts of bravery, there seems to be a lack of information on the subject of medals, buttons, bars, etc. Will you please publish a list of decorations that overseas men are entitled to have and to wear; also a list of the decorations to which discharged soldiers who did not go overseas are entitled? How are such victory medals, service medals, bars, etc., procured—by purchase or as a gift from the government?

L. A. DENIS, M.D., West Hoboken, N. J.

ANSWER.—G. O. No. 48, War Department, April 9, 1919, is all that has been published on the subject of medals and ribbons for the present war. This order provides that a war service medal, to be known as the Victory Medal, will be awarded to all officers and enlisted men who served on active duty in the Army of the United States at any time between April 6, 1917, and Nov. 11, 1918, and whose service was honorable. Battle clasps will be awarded to officers or enlisted men who have actually participated under orders in the following engagements: (*a*) Somme, defensive, between March 21 and April 6, 1918. (*b*) Lys, between April 9 and April 27, 1918. (*c*) Aisne, on the Chemin des Dames and northeast of Rheims between May 27 and June 5, 1918. (*d*) Montdidier-Noyon, between June 9 and June 15, 1918. (*e*) Champagne-Marne, between July 15 and July 18, 1918. (*f*) Aisne-Marne, between July 18 and Aug. 6, 1918. (*g*) Somme, offensive, between Aug. 8, and Nov. 11, 1918. (*h*) Oise-Aisne, between Aug. 18 and Nov. 11, 1918. (*i*) Ypres-Lys, between Aug. 19 and Nov. 11, 1918. (*j*) St. Mihiel, between Sept. 12 and Sept. 16, 1918. (*k*) Meuse-Argonne, between Sept. 20 and Nov. 11, 1918. (*l*) Vittorio-Veneto, between Oct. 24 and Nov. 4, 1918.

Clasps will be awarded to each officer and enlisted man who served overseas and is not entitled to a battle clasp under paragraph 2, for service in France between April 6, 1917, and Nov. 11, 1918; for service in Italy between April 6, 1917, and Nov. 11, 1918; for any service in Siberia; for any service in European Russia, and for service in England between April 6, 1917, and Nov. 11, 1918.

A bronze star, three-sixteenths inch in diameter, will be placed on the service ribbon for each battle clasp awarded. When an officer or enlisted man has been cited in orders issued from the headquarters of a force commanded by a general officer for gallantry in action not justifying the award of a medal of honor, distinguished-service cross, or distinguished-service medal, he will wear a silver star for each such citation.

Pending the procurement and issue of the Victory Medal, organization commanders are authorized to permit those serving under them to wear the service ribbon and stars to which they are entitled as shown by their records.

The War Department has also issued a circular concerning victory buttons. A lapel button to be known as the Victory Button, for wear on civilian clothes, will be issued to all officers, enlisted men, field clerks and members of the Army Nurse Corps who served honorably on active duty in the Army of the United States for a period of fifteen days at any time between April 6, 1917, and Nov. 11, 1918. The button will be of silver for those wounded in action and bronze for all others.

The various medals, battle clasps, bronze stars, ribbons and Victory Buttons mentioned are not as yet ready for issue and will not be for some time, nor have instructions been issued as to how such decorations are to be distributed when available. When the decorations are ready for issue and instructions regarding such issue have been promulgated, the matter will be given wide publicity in the press.

PRESCRIBING ALCOHOL—PAREGORIC NOT INCLUDED UNDER NARCOTIC ACT

To the Editor —1. Is there a new law preventing a physician from prescribing absolute alcohol for medical purposes? 2. Is it necessary to put a registry number on a prescription containing camphorated tincture of opium?

F. E. DOSTAL, M.D., Chicago.

ANSWER.—1. No. 2. No.

"INTERCOSTAL PAIN FOLLOWING HERPES ZOSTER"

To the Editor —The question asked by J. W. W. regarding the treatment for severe intercostal pain following herpes zoster (THE JOURNAL, May 31, 1919, p. 1635) leads me to write of the experience I had with this condition four years ago. A woman suffered from this condition for a period of four or five months. She was more than 70 years old, and all remedies used were of no avail. She was constantly kept under the influence of opiates. Examination revealed no signs of cord lesion. It occurred to me that injection of alcohol into the region of the posterior root ganglion might be tried. This was done. For nearly twenty-four hours the pain was intensified, and then suddenly disappeared, the patient remaining well until about three years ago, when she died.

This method, if carefully done, is probably without any particular danger. The plexus surrounds this ganglion, and the aim should be, as happened in this case, to strike this plexus, drawing back on the piston of the syringe and obtaining blood. This shows that the region of the ganglion has been reached. The needle is withdrawn slightly and the injection made. I used in this particular case 2 c.c. of 80 per cent. alcohol. In such a painful condition this treatment might be worth trying before surgical methods are resorted to.

S. R. SALZMAN, M.D., Toledo, Ohio.

A Lesson of the War.—We all hope that we are done with war and with soldiers, at least for a generation. We can, however, derive certain broad lessons applicable to the conditions of peace from the experiences and intense activities of war, when almost unlimited funds were obtainable for research and the experiences ordinarily scattered over years were crowded into a few months. One of these lessons is that scientific men need to develop the capacity to become heads of large enterprises without ceasing to be scientific, without degenerating, as is too often the case, into the superclerk, who seems to be the American ideal of the high executive official. It is not enough for the scientific man to become the expert adviser to the unscientific administrator. If the latter has the responsibility he will use his power as he and not as the scientific man sees fit.—Yandell Henderson, *Science*, May 9, 1919.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ALABAMA: Montgomery, July 8. Chairman, Dr. S. W. Welch, State Capitol, Montgomery.

ARIZONA: Phoenix, July 1. Sec., Dr. Allen H. Williams, 219 Goodrich Bldg., Phoenix.

CALIFORNIA: San Francisco, June 23-26. Sec., Dr. Charles B. Pinkham, 904 Forum Bldg., Sacramento.

COLORADO: Denver, July 2. Sec., Dr. David A. Strickler, 612 Empire Bldg., Denver.

CONNECTICUT: New Haven, July 8-9. Sec., Regular Bd., Dr. Charles A. Tuttle, 196 York St., New Haven; Sec., Homeopathic Bd., Dr. Edwin C. M. Hall, 82 Grand Ave., New Haven; Sec., Eclectic Bd., Dr. James E. Hair, 730 State St., Bridgeport.

DISTRICT OF COLUMBIA: Washington, July 8-10. Sec., Dr. E. P. Copeland, The Rockingham, Washington.

KENTUCKY: Louisville, July 1-3. Sec., Dr. J. N. McCormack, Fowling Green.

LOUISIANA: New Orleans, July 1-3. Sec., Dr. E. W. Mahler, 141 Elk Place, New Orleans.

MAINE: Augusta, July 1-2. Sec., Dr. Frank W. Searle, 776 Congress St., Portland.

MASSACHUSETTS: Boston, July 8-10. Sec., Dr. Walter P. Bowers, State House, Boston.

MISSISSIPPI: Jackson, June 24-25. Sec., Dr. W. S. Leathers, University.

NEBRASKA: Lincoln, June 30-July 2. Sec., Dr. H. J. Lehnhoff, 514 First National Bank, Lincoln.

NEW MEXICO: Santa Fe, July 14. Sec., Dr. R. E. McBride, Las Cruces.

NEW YORK: Albany, Buffalo, New York and Syracuse, June 24-27, Mr. George M. Wiley, director, Exam. and Inspections Div., State Edu. Bldg., Albany.

NORTH CAROLINA: Raleigh, June 23. Sec., Dr. H. A. Royster, 423 Fayetteville St., Raleigh.

NORTH DAKOTA: Grand Forks, July 1-4. Sec., Dr. G. M. Williamson, 850 Belmont Ave., Grand Forks.

OKLAHOMA: Oklahoma City, July 8-9. Sec., Dr. J. J. Williams, Weatherford.

OREGON: Portland, July 1-3. Sec., Dr. Frank W. Wood, 559 Morgan Bldg., Portland.

PENNSYLVANIA: Philadelphia and Pittsburgh, July 8-10. Sec., Nathan C. Schaeffer, State Capitol, Harrisburg.

RHODE ISLAND: Providence, July 10-11. Sec., Dr. B. U. Richards, State House, Providence.

SOUTH DAKOTA: Deadwood, July 8. Sec., Dr. P. B. Jenkins, Wasbay.

TEXAS: Austin, June 24-26. Sec., Dr. M. F. Bettencourt, Mart.

UTAH: Salt Lake City, July 7-8. Sec., Dr. G. F. Harding, 407 Templeton Bldg., Salt Lake City.

VERMONT: Burlington, June 26-28. Sec., Dr. W. Scott Nay, Underhill.

WASHINGTON: Seattle, July 1-3. Sec., Dr. C. N. Suttner, 415 Old National Bank Bldg., Spokane.

WEST VIRGINIA: Huntington, July 8-10. Sec., Dr. S. L. Jepson, Masonic Bldg., Charleston.

WISCONSIN: Milwaukee, June 24-26. Sec., Dr. J. M. Dodd, 220 E. 2nd. St., Ashland.

WYOMING: Cheyenne, June 23-25. Sec., Dr. H. E. McCollum, Laramie.

REGULATIONS GOVERNING MEDICAL PRACTICE IN AUSTRALIA AND NEW ZEALAND

New South Wales.—The candidate for registration is required to communicate with the secretary of the Medical Board of New South Wales, Sydney, at least five days before a monthly meeting, which is held on the second Wednesday in every month, and to submit his diploma or other certificate of qualification. The candidate is required to prove to the satisfaction of the board: (1) that he is a doctor or bachelor of medicine of some university, or a physician or surgeon licensed or admitted as such by some college of physicians or surgeons in Great Britain or Ireland; or (2) that he has passed through a regular course of study of not less than five years' duration in a school of medicine, and that he has received from some university, college or other body duly recognized for that purpose in the country to which such university, college or other body may belong, a diploma, degree or license entitling him to practice medicine in that country; or (3) that he is a member of the Company of Apothecaries of London or of the Apothecaries' Hall, Dublin; or (4) that he is a medical officer of His Majesty's sea or land service, or (5) that he is a person placed on the separate register under Section 8 of the Act (Nov. 29, 1912). The penalty for using the title of physician, Doctor of Medicine, Licentiate in Medicine and Surgery, or Bachelor of Medicine is about $250, and in case of continuing offense, $25 a day from the date of the first offense or imprisonment for a term not exceeding twelve months.

Queensland.—The candidate for registration must submit his diploma or other certificate for approval to the Medical Board of Queensland, at Brisbane. The board meets on the first Thursday of every month. A candidate must have passed through a regular course of medical study in a school of medicine and received from some college, university or other body, duly recognized for that purpose in the country to which such university, college or other body may belong, a diploma or license entitling him to practice medicine in that country, or must be a person who is, or has been, a medical officer, duly appointed and confirmed, of His Majesty's sea or land service. In dealing with diplomas and certificates of qualification, the essential point is that the board must be satisfied. The penalty is similar to that of New South Wales.

South Australia.—Any person who wishes to be registered as a medical practitioner must give to the secretary of the Medical Board of South Australia, Adelaide, at least three days' notice of his intention to apply. This board meets on the second Thursday in every month. He must submit his diploma and produce a declaration, signed before a justice of the peace, to the effect that he is the person whose name appears on the diploma. The fee for registration is about $5. The applicant must have a medical degree, diploma or license to practice, granted by a university, college or licensing body of any British colony or possession or by any foreign university, college or licensing body which in the opinion of the medical board is equal to the qualification entitling the holder to be registered in the United Kingdom. He must satisfy the board that he has passed through a regular graded course of medical study of not less than four years' duration in a British or foreign school of medicine, and has received from such college, school or university or body duly recognized for that purpose in the country to which such institution may belong, a medical diploma or degree certifying to his ability to practice.

Tasmania.—No one is deemed a legally qualified medical practitioner who is not the holder of a certificate of qualification from the Medical Council of Tasmania, Department of Public Health, Hobart, Tasmania. Applicant shall present to the council (which meets on the first Tuesday in each month) the testimonium, diploma, license or certificate from some university, college or other body duly recognized for such purposes in the country to which such university, college or other body may belong. Subject to the foregoing qualifications, the council may register duly certified holders of British registrable degrees. The registration fee is about $15.

Victoria.—The office of the Medical Board of Victoria is the Chief Secretary's Department, Spring Street, Melbourne, Victoria, and the monthly meeting for registration takes place on the first Tuesday of every month. To be entitled to registration, an applicant must have passed through a regular course of medical and surgical study of five or more years' duration. Persons holding British registrable degrees may be registered. No university or college or other body in any country other than the United Kingdom or a British possession is recognized by the board unless registered legally qualified medical practitioners of Victoria are, by virtue of being so registered, and without further examination, entitled to practice their profession in such country, either on registration or otherwise. The fee for registration is about $15. The penalty is similar to that of New South Wales.

Western Australia.—Applicants must submit their degrees, diplomas, certificates or other proofs to the Medical Board of Western Australia, Public Health Department, Perth, West Australia, together with proof of good character and qualification, skill, and ability to practice medicine or surgery. Only persons holding British, Australian, Tasmanian or New Zealand qualifications and those holding the registration certificate of the General Medical Council of Great Britain can be registered.

New Zealand

In order to be registered the applicant must cause at least one month's notice of his intention to apply to be published in the *Gazette*, and also in some newspaper circulating in the district in which the applicant intends to practice; and at least one month before the date of his application for registration he must deposit his diploma or other evidence of qualification, or a true copy thereof certified as correct, in the office of the registrar nearest to the place where he intends to register. The applicant may then apply to the registrar-general, Wellington, New Zealand, for registration, forwarding with his application a copy of the advertisement and *Gazette* notice. The applicant must satisfy the board that he is (1) a graduate in medicine and surgery of the University of New Zealand; or (2) registered on the register of medical practitioners in the United Kingdom; or (3) eligible for registration on such, or (4) the holder of a diploma approved by the board. The board may refuse to approve any diploma unless the graduates in medicine and surgery of the University of New Zealand are by virtue of such graduation, and without further examination, entitled to be registered in the country in which is situated the university or other institution by which this diploma has been granted. No person is entitled to be registered if he has been convicted of any offense punishable by imprisonment with hard labor for a term of two years or upward or is otherwise not of good character.

A fee of about $15 is payable when the diploma or other evidence of qualification is deposited. There is a slight charge for a certificate of registration or for alteration or addition to qualifications to register. The act took effect, March 1, 1915.

New Mexico January Examination

Dr. W. E. Kaser, secretary of the New Mexico Board of Health and Medical Examiners, reports that 7 candidates were licensed on credentials and 1 candidate was licensed through reciprocity, at the meeting held at Sante Fe, Jan. 13-14, 1919. The following colleges were represented:

College	LICENSED ON CREDENTIALS	Year Grad.	No. Licensed
Rush Medical College		(1906)	1
Kansas City Medical College		(1895)	(1903) 2
Willamette University			(1907) 1
Medical College of Ohio			(1900) 1
Western Pennsylvania Medical College			(1901) 1
Vanderbilt University			(1900) 1

College	LICENSED THROUGH RECIPROCITY	Year Grad.	Reciprocity with
University of Arkansas		(1916)	Arkansas

Colorado April Examination

Dr. David A. Strickler, secretary of the Colorado State Board of Medical Examiners, reports the written examination held at Denver, April 1, 1919. The examination covered 8 subjects and included 80 questions. An average of 75 per cent. was required to pass. Of the 16 candidates who took the physicians and surgeons examination, 14, including 8 osteopaths, passed and two osteopaths failed. Seventeen candidates were licensed through reciprocity. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
Hospital College of Medicine, Louisville		(1901)	80.6
Eclectic Medical University		(1910)	75
Washington University		(1918)	82.3
Jefferson Medical College		(1915)	87.2
Vanderbilt University		(1916)	80.6
University of Tennessee		(1912)	80.3

College	LICENSED THROUGH RECIPROCITY	Year Grad.	Reciprocity with
College of Physicians and Surgeons, Chicago		(1902)	Illinois
Keokuk Medical College		(1898)	Illinois
Tulane University		(1912)	Louisiana
University of Maryland		(1915)	Washington
University of Michigan Homeo. Medical College		(1906)	Michigan
College of Physicians and Surgeons, St. Louis		(1897)	Missouri
University Medical College		(1897) Iowa; (1903)	Kansas
University of Kansas City		(1884)	Missouri
Washington University		(1917)	Missouri
John A. Creighton Medical College		(1901)	Nebraska
Bellevue Hospital Medical College		(1889)	Iowa
Western Reserve University		(1905)	Ohio
Tennessee Medical College		(1894)	Kansas
University of Nashville		(1907)	Tennessee
Baylor University		(1909) Texas; (1916)	Texas

Book Notices

HUMAN INFECTION CARRIERS: THEIR SIGNIFICANCE, RECOGNITION AND MANAGEMENT. By Charles E. Simon, B.A., M.D., Professor of Clinical Pathology in the University of Maryland School of Medicine and the College of Physicians and Surgeons, Baltimore, Maryland. Cloth. Price, $2.25. Pp. 250, with illustrations. Philadelphia: Lee & Febiger, 1919.

This book gives the impression that it has been written rather hurriedly, the consequence being that while many facts in regard to human infection carriers are included, yet the book does not constitute a well digested and thorough summary of our present knowledge of this subject. The use of the terms "active" and "passive" carriers, to denote that in one case the carriers have actually been infected with the germs in question and that in the other the germs have played a purely passive rôle, seems unfortunate because the impression may be conveyed that the carrier himself may be active or passive. In the chapter on carriers in epidemic meningitis, no reference is made to the standard technic of meningococcus carrier detection adopted by the medical departments of the United States Army and Navy and by the United States Public Health Service, and which represents an earnest effort to formulate a satisfactory technic for general practical use. The chapter on influenza proceeds as if the Pfeiffer bacillus had been accepted definitely as the cause of a certain type of pandemic influenza. It is remarkable that in a book published in 1919 the only reference to the literature on influenza should be to German contributions. In fact, in connection with no disease discussed in this book does it appear that the literature has been studied thoroughly and systematically; and yet to know what has been done in any field will ever be the only basis for a satisfactory presentation of the problems of that field. American medicine would be held in greater respect if hastily prepared books with little evidence of scholarship were not published.

ASPECT OF DEATH AND CORRELATED ASPECTS OF LIFE IN ART, EPIGRAM, AND POETRY. Contributions Towards an Anthology and an Iconography of the Subject. Illustrated Especially by Medals. Engraved Gems, Jewels, Ivories, Antique Pottery, etc. By Frederick Parkes Weber, M.A., M.D., F.R.C.P. Third edition. Cloth. Price, $7.50 net. Pp. 786, with 145 illustrations. New York: Paul B. Hoeber, 1918.

This edition of a most interesting work has been greatly enlarged and thoroughly revised. It is a veritable anthology of death, the author having gathered together all that is beautiful, romantic, witty, humorous, pessimistic or artistic concerning the end of human life. Peculiarly, the book is not pessimistic in tone, but gives the distinct impression that mankind in mass has ever viewed death philosophically. The book contains thousands of quotations from literature and more than one hundred interesting illustrations. The reader, in fact, is left with the impression given by the old English couplet

> To look on life with placid eye,
> And neither fear nor wish to die.

WAR SURGERY OF THE FACE: A TREATISE ON PLASTIC RESTORATION AFTER FACIAL INJURY. By John B. Roberts, A.M., M.D., F.A.C.S., Professor of Surgery in the University of Pennsylvania Graduate School of Medicine. Prepared at the Suggestion of the Subsection on Plastic and Oral Surgery Connected with the Office of the Surgeon General. Cloth. Price, $4.50. Pp. 442, with 256 illustrations. New York: William Wood & Co., 1919.

The author has endeavored to correlate the literature arising from the experiences of general and oral surgeons in the army and navy services of the various nations recently at war, adding to this material the results of civil practice in traumatic surgery of the face. The book is therefore of decided interest in the field of industrial surgery, since reparative surgery of the face following wounds received in warfare is identical with the treatment of wounds caused by industrial accident. The work is divided into three parts, the first part consisting of a comprehensive outline of the surgical anatomy of the face. The pathology and treatment of facial wounds of every description is considered in the

second part. The third part takes up the reconstructive treatment of war injuries of the face. The book completely covers the field of war or accidental surgery, and is readable and instructive.

VITAL STATISTICS: AN INTRODUCTION TO THE SCIENCE OF DEMOGRAPHY. By George Chandler Whipple, Professor of Sanitary Engineering in Harvard University. Cloth. Price, $4. Pp. 517, with illustrations. New York: John Wiley & Sons, Inc., 1919.

This text has been prepared by the author especially for students in courses on public health. It tells what statistics are, how to express vital facts by figures, how to tabulate them, how to compute birth rates and death rates, how to adjust and standardize death rates, and how to make life tables. It contains also the international list of causes of death and an excellent table of logarithms for making computations. This book shows why figures sometimes lie and also tells the reader how to tell which figures lie and which figures tell the truth. The text is very fully illustrated with numerous diagrams, charts and tables. While not strictly a medical book, this handbook is one which every physician who is at all interested in public health will find of particular value.

Medicolegal

Board of Health Closing Schools for Influenza

(Globe School District No. 1 v. Board of Health et al. (Ariz.), 179 Pac. R. 55)

The Supreme Court of Arizona affirms a judgment in favor of the defendants in this action, wherein the plaintiff board of school trustees of the school district of the city of Globe sought to enjoin the local city board of health and the city officers from enforcing a health order or regulation closing the schools during the epidemic of Spanish influenza. The court holds that the measure adopted by the local board of health, closing the schools of the Globe school district, was, at the time adopted, a valid, enforceable order and regulation for the purpose of reasonably protecting the public health, under the statutory authority to make and enforce all needful rules and regulations for the prevention and cure, and to prevent the spread of any contagious, infectious, or malarial disease among persons; that during the existence of said Spanish influenza in epidemic form in said community said regulation was binding on the educational administrative officers, and continued binding so long as such epidemic continued in such form, and no longer.

The court says that to concede that any board of health has been delegated the legislative power to declare what is or what is not a nuisance is to concede that boards of health may be delegated legislative power, and this cannot be done. Such boards of health may abate nuisances, and in so doing, if they mistake that for a nuisance which is not in fact a nuisance, then the board acts without jurisdiction, because the existence of a nuisance in fact gives the board the power to act. No portion of the health laws of Arizona attempts to or could grant to health boards the authority to arbitrarily declare a given condition a nuisance. An attempt by such board to declare what is or what is not a nuisance is futile, null and void. Therefore, that portion of the resolution of the defendant board of health which attempted to define nuisances, and which declared certain assemblies, including school sessions, nuisances, was without authority of law and of no force or effect.

But the material thing here was the order closing the schools; and it seems clear to the court that the statute and the public exigency were sufficient to justify the order of the local board of health prohibiting the educational officers from holding sessions of school. But the exigency is met and satisfied by the disappearance of the infectious or contagious disease. As a matter of police regulation, the authority of the board of health over the schools ends with the necessity of the regulation. The court has found no adjudicated case that denies the power of public bodies exercising the authority of supervising the public health, such as boards of health established by the laws of Arizona, to make a valid order closing schools at times when infectious or contagious disease is epidemic in the community, as was admittedly the situation at Globe when the orders here in question were made. The court does find, on the other hand, cases wherein the courts treat, as a matter of course, the right of health officers to close schools at times of such emergency.

While school trustees and educational administrative officers are invested with power to establish, provide for, govern, and regulate public schools within their respective jurisdiction, they are in these respects nowise subject to the direction or control of the state or county or city boards of health, yet when the necessity arises to close the schools for the protection of the public health such emergency, while it exists, is a superior power to that given the school administration officers, and the law of necessity controls the situation during the existence of the emergency giving rise to the power. And while local boards of health are no authority conferred on them to legislate, they are granted power within their jurisdiction to make rules and regulations to facilitate the enforcement of the health laws, and in exercising such powers they may adopt such measures as are reasonable to carry out such health laws according to the true spirit and intent of the legislature.

Physician Contracting for Salary and Employer Fees

(Sherrill v. Union Lumber Co. (Texas), 207 S. W. R. 149)

The Court of Civil Appeals of Texas affirms a judgment in favor of the defendant company, which was sued by the plaintiff, a physician, for $1,753 which he claimed was due him for medical treatment rendered to injured employees of the company during the first week of their injuries, in accordance with the workmen's compensation act of the state, notwithstanding an alleged contract between him and the company that he should receive a salary or designated compensation for his services, leaving for the company the medical fees which should be paid by the insurer carrying the risk on the employees for medical services rendered during the first week of their injuries. The court says that if, as was substantially found by the jury, the plaintiff, on entering the employ of the defendant as a physician at its mill plant, entered into an agreement or understanding with the defendant to the effect that he should be paid a certain cash compensation for his services in treating the employees of the millyard, with the further understanding or agreement that he would forbear to claim the fees for which the insurer might become liable to him for his services to injured employees during the first week of injuries, under the workmen's compensation act of the state then in effect (Act of 1913), and, further, that such fees might be collected and retained by the defendant, then the court can see no reason for holding that such contract was in violation of the public policy of the state, and it therefore declines to so hold. But if the court is wrong in this view of the question, and if the necessary tendency of such contract was vicious and against sound public policy, still there would be a serious question as to whether the court ought to sustain the plaintiff's assignment of error on this point, for the reason that if the contract was made he was undeniably a party to it, and if the same was vicious, and necessarily tended to injure the public generally, or any class or members of the public, or was against the public welfare in any respect, and therefore against sound public policy, then it must be admitted that the plaintiff was in pari delicto or equal legal fault with the defendant in entering into the contract. It seems to the court that the plaintiff should not be permitted to profit by the contract to the extent of receiving and retaining the compensation that was allowed him by the defendant under its terms, and at the same time repudiate that portion of the contract which gave to the defendant the right to collect and retain the fees paid by the insurer, and which were held by the defendant under the terms of the claimed contract. If it should be held that the plaintiff could assail this contract so far as it permitted the defendant to have and receive the money to be paid by the insurer on the ground of public

policy, then it would be to hold, in effect, that the plaintiff might take advantage of a vicious and illegal contract to which he was undeniably a party, so far as it was beneficial or favorable to him, and repudiate it in all respects where not so. For this reason alone the court would be inclined to overrule the assignment of error, even if it were of the opinion that the tendencies of the contract were such as to make it against public policy.

Unnecessary Roentgenoscopy Not Required

(United States Fidelity & Guaranty Co. et al v. Wickline, (Neb.), 170 N. W. R. 193)

The Supreme Court of Nebraska holds that a claimant for compensation under the employers' liability act pursuant to Section 3675 of the Revised Statutes of Nebraska of 1913, cannot be denied a recovery because of a refusal to submit to a roentgen-ray examination or to have a roentgenogram taken of the person, where the uncontradicted evidence shows that neither was necessary. Section 3675 provides that, after an employee has given notice of an injury he shall, if so requested by the employer or the insurance company carrying such risk, submit himself to an examination by a physician or surgeon furnished and paid for by the employer or the insurance company, and refusal of the employee to submit to such examination shall deprive him of the right to compensation during the continuance of such refusal. The court says that under the statute the request for an examination must be reasonable, and it did not appear to have been in this case. The testimony before the court showed affirmatively that neither a roentgen-ray examination nor a roentgenogram was necessary. No physician nor other person testified that either was necessary, nor did it appear that a request was made to the court to require the employee to submit to either. In the present advanced state of the science of roentgen-ray examinations and the taking of roentgenograms of the person there appears to be no reason why such examination or roentgenogram should not be permitted by a claimant for compensation under the employers' liability act, on request by the employer or insurer, unless the request is shown to be unreasonable.

Liability of Physicians and Manufacturer of Ether

(Moehlenbrock v. Parke, Davis & Co. et al. (Minn.), 169 N. W. R. 541)

The Supreme Court of Minnesota affirms an order denying the defendant company's separate motion for either a judgment in its favor or a new trial, in this action against two physicians and the company to recover damages for the death of one Moehlenbrock, in which a verdict was returned in favor of the plaintiff, as administrator, against all of the defendants. The court says that Moehlenbrock, a man 21 years old, robust and apparently in good health except for diseased tonsils, died just after being operated on for the removal of his tonsils. One of the defendant physicians operated, and the other administered the anesthetic, using a brand of ether manufactured by the defendant company. While the ether was being given, it was noticed that the patient became cyanotic, and it was necessary to stop and revive him to some extent before proceeding. After the tonsils were removed, he lapsed into the same condition several times, and finally, within about three hours from the commencement of the operation, all efforts to revive him failed and he died.

The plaintiff claimed that the physicians contributed to the fatal result by their negligence in the administration of the ether, and that the company also contributed thereto by its negligence in manufacturing and placing impure and dangerous ether on the market for anesthetic purposes. Under the charge thus made, of distinct and differing acts of negligence concurring to bring about Moehlenbrock's death, the physicians and the company were placed in a peculiar antagonistic position. For, in addition to other defenses, it was a good defense for the physicians to show that the fatal outcome was due wholly to impurities in the ether, a defect they could not anticipate; and for the company to show the carelessness of the physicians as the sole cause. That made the defendants, in a measure, adverse parties to each other; and because of such antagonistic positions the company was accorded a wide range in cross-examining the physicians, even though called by the plaintiff for cross-examination.

Complaint was made of rulings allowing the defendant physicians to express an opinion as to the cause of death, confirmed, as they admitted it was in part, by information acquired afterward, concerning an analysis of ether made by a chemist; but the court thinks there was no error here. As professional men, the physicians were competent to express an opinion as to the cause of death. The value of that opinion was for the jury; they determining whether the physicians were justified in relying, for corroboration of the opinion expressed, on the presence in the ether as administered to Moehlenbrock of the impurities testified to by the chemist.

The identification of the ether analyzed as that administered to Moehlenbrock, and to another patient the next day, being sufficient, and the evidence sufficient that there had been no change in the condition of the ether during the twenty-four hours between the two operations, it would be proper, both for the experts and the jury, to consider the similarity of the effects of the ether on the two patients in determining the cause of death. It is common knowledge that human beings are physically sufficiently alike so that we may reason that when a drug or substance produces a marked effect on one person it will, to a certain extent, similarly affect another, taking into account age, strength and other conditions present. In fact, the healing art is largely predicated on this similarity of cause and effect in different persons.

The physicians were not the agents nor servants of their patient, so that their negligence could be considered his negligence, to be taken advantage of as a defense by one who, by an independent act of negligence, also proximately contributed to the injury. Nor was the company entitled to regard the operation as a joint enterprise on the part of Moehlenbrock and the physicians, so as to escape liability for its own negligence. In the actual conduct of the operation Moehlenbrock could take no conscious part. It was the joint enterprise of the physicians only.

It was not necessary to prove that the dangerous condition of the ether was known to the company. It was its duty to know that the article it placed before the medical profession did not contain dangerous and unsafe impurities, and was so put up that these impurities could not form in the container, when kept according to directions.

Admissibility of Evidence as to Operations in Hospitals

(Sparer v. Travelers' Insurance Co. (N. Y.), 173 N. Y. Supp. 673)

The Supreme Court of New York, Appellate Division, First Department, says that, in this action on a life insurance policy issued by the defendant on the life of one Sparer, who died in a hospital after an operation for cancer of the stomach, the defendant sought to prove by the operating and assistant surgeon at the hospital, and by the hospital records, the condition the insured was in at the time of the operation; but this was properly excluded under Section 834 of the Code of Civil Procedure, prohibiting disclosures by physicians and surgeons. However, the defendant then called a physician who at the time of the operation was a medical student and in that capacity attended the operation, and he was permitted to testify that when Sparer's body was exposed on the operating table he saw a scar on his abdomen and when the abdomen was opened it showed that an operation known as posterior gastroenterotomy had been performed. The defendant tried to put in evidence another hospital's record of the case, which, it is held, was properly excluded. But the court thinks it was erroneous to exclude an offer of proof by a surgeon that, at such other hospital, between certain dates, he performed an operation on the body of the insured. He could not have described the operation, or any condition that he observed which was necessarily disclosed by an inspection of the body of the insured; but he could have testified that he at a certain time performed an operation on the insured at the hospital.

Social Medicine, Medical Economics and Miscellany

Health and Hours of Labor

The human factor in industry is subject to certain limitations. One of these is that a man or a woman cannot work continuously to good effect except within limits. Beyond a certain number of hours of work in a given day a worker's efficiency and production rate decrease. Long hours maintained for weeks or months impair the health of the worker. The day's work may be so long or so arduous that the worker does not have time or energy to devote to cultural, recreational or family interests. These are facts concerning which there is more or less general agreement.

How many hours shall constitute a day's work, considered in the interests of health and efficiency, is not easy to determine. Industry, interested primarily in production, would regulate hours in relation to output. This does not mean that individual employers and firms are not sometimes prompted by humanitarian motives in matters relating to the welfare of their employees. Yet in general the attitude of industry toward measures for the promotion or protection of the health and comfort of workers seems to depend on the relation of these measures to efficiency and cost of production. Studies have been made in various industries to determine what should be the standard work day or work week.

An investigation made in the silk manufacturing industry by the National Industrial Conference Board has shown that, as a whole, maximum output lies at some point between fifty and fifty-four hours a week. Similar studies made in the cotton manufacturing and the wool manufacturing industries indicates that the point of maximum production falls below a fifty-four hour week. As to health, there was found no perceptible difference between the health of employees who worked fifty hours a week and that of those who worked fifty-two or fifty-four hours. Public interest in the length of the work day or the work week lies chiefly in the relation between the hours of work and the health of the worker. The maximum number of hours which an individual may work per day or per week without endangering health depends largely on the age and sex of the worker and the character of the work. Little effort has been made to regulate by law the length of the working day of men except in certain industries and as regards overtime. Two states, Oregon and Mississippi, have ten hour laws for male workers in most industrial employment. In all but one or two states, the hours of child workers between the ages of 14 and 16 or 17 are regulated by law. Thirty-eight states (including the District of Columbia) have laws regulating the length of the work day and the work week of women. In seven states there is an eight hour day; in eleven states a nine hour day; in twenty, a ten to eleven hour day. Two states make the maximum work week forty-eight hours; fifteen make it from fifty-four to fifty-five hours; eleven make it from fifty-six to fifty-seven hours; eight, from sixty to sixty-three hours, and two permit a seventy hour week. Fifteen states regulate night work of women, ten prohibiting it altogether.

In Illinois, which now has a ten hour law for women workers, a state commission headed by Dr. James B. Herrick has recently made a study of the relation between hours and health of women workers. A majority of the commission has reported in favor of an eight hour day and a forty-eight hour week and has recommended their establishment by law, such regulation to apply to all industries covered by the ten hour law now in force, "including all office workers and excepting graduate nurses" (Report of the Illinois Industrial Survey, December, 1918). The commission based its recommendations, so far as the health of employed women is concerned, on the fact that a longer day than eight hours and a longer week than forty-eight hours affect health primarily as they produce fatigue.

Fatigue is generally recognized as being the most important effect on the worker of either long hours or intensity of occupation. It may be considered in both its temporary and its cumulative effects. Temporary fatigue, by its effect on vision, hearing, attention, muscular control and reaction rate, tends to lessen production and to increase the danger of accidents. Cumulative fatigue frequently results in illness, with resultant absence from work and attendant loss to both employer and employee. Investigations of the effect of rest periods in reducing temporary fatigue and preventing cumulative fatigue (as reported in Rest Periods for Industrial Workers, Report of National Industrial Conference Board, January, 1919) lead to the conclusion that for certain occupations short rest periods of from five to fifteen minutes in the middle of both the forenoon and the afternoon may be beneficial to the health of the employee and tend to increase his production.

International Red Cross Conference

Representatives from the Red Cross societies of the United State, France, Great Britain, Italy and Japan met at Cannes (France) in April to propose to the Red Cross organizations of the world an extended program of future activities in the interest of humanity. One of the delegates of the Red Cross of Great Britain was Sir Arthur Newsholme, K.C.B., M.D. At a meeting held May 2 at the national headquarters of the American Red Cross in Washington, D. C., Sir Arthur reported briefly on what was done at the Cannes conference.

The conference held a number of general meetings in which the general policy to be pursued was discussed and then divided itself into sections dealing with the following subjects: preventive medicine, child welfare, tuberculosis, malaria, venereal diseases, nursing, information and statistics. These sections were not selected as covering the entire ground of preventive medicine, but as forming branches of work in which early investigation and action appeared to be most desirable. The conference agreed that the new work of the Red Cross would naturally divide itself into two parts: an international bureau and national organizations. The international bureau, in the scheme proposed for the consideration of the conference—which received general approval—would act as a great center for collecting information on various public health subjects, and for digesting it and subsequently distributing it by means of special publications, or periodical journals, or on application from those requiring specialized information. It would also act as a means of educating the general public on urgent problems affecting its welfare; and it would be utilized as a center, organizing in less favored communities missions which would undertake local investigations and remedial work. These surveys and activities would be intended rather as demonstration centers than as permanent organizations, the intention being to withdraw them as soon as the necessary work could be carried on by local Red Cross or other organizations.

It was suggested that the central bureau should comprise a number of branches dealing with epidemic diseases, tuberculosis, venereal diseases, child welfare, nursing and other subjects, collating and analyzing information and distributing it through the medium of the national Red Cross of each country. Such a central bureau will be of the greatest value to all social and public health workers, while not clashing with any existent agency. The relation of the central bureau to national Red Cross societies will be one of mutual cooperation. The central bureau will provide information and facilities for national work; the actual work will need to be carried out in each country nationally and in the main from funds supplied by that country. It is not intended that the National Red Cross shall undertake, much less compete with, work already being carried out either by local authorities or by existing voluntary associations.

Among the more urgent problems of preventive medicine, priority was given to advocacy of combined efforts for the prevention of the major pests of mankind, of the provision of laboratory assistance in the diagnosis of disease and in securing more accurate vital statistics and improvements in public health legislation. In child welfare work, the importance of health visiting, of child welfare centers, of an improved midwifery service and of continuous observation of children under school age as well as scholars was empha-

sized. In regard to tuberculosis, stress was laid on the essential point that measures against this disease must embrace the whole of the sick lifetime of the patient, and must include, when necessary, measures for obviating the results arising from the fact that the partially recovered patient commonly is unable to earn an economic wage. In the prevention of venereal diseases a similarly wide outlook was advocated, including the necessary social and moral as well as medical measures against their spread.

Inequality of the Pupils

The question of the meaning of inequality of the pupils is always being raised for diagnostic purposes, especially in affections of the thorax. According to many authorities, "inequality of the pupils is always pathologic"; but many observers are not so dogmatic, and admit that the condition occurs in from 1 to 10 per cent. of all cases.

In order to gain some idea of the frequency of this condition, T. Stewart Barrie examined, for this peculiarity, in the course of his work as an ophthalmic surgeon in the Glasgow recruiting area, the eyes of 326 men who had been sent for special examination. The results are given in the *British Medical Journal*, Nov. 9, 1918. Inequality of the pupils was found in thirty-five cases, a proportion of 10.73 per cent. In none of these cases was there any sign of ocular disease or manifestation of disease of the central nervous system. The pupils reacted readily to light, and the consensual and convergence reflexes were normal; in each case the inequality persisted in the contracted state.

The inequality in every case was indisputable, the difference between the diameters of the two pupils being from 1 to 2 mm. This difference is not large, but as pupils are compared by areas it was easier to note differences than to measure them. For example, pupils having diameters of 3 and 2 mm., respectively, have areas in the proportion of 9 and 4.

An analysis of these thirty-five cases gave the following results:

1. The left pupil was the larger in twenty-one cases, the right in fourteen.

2. The visual acuity without glasses was the same in ten cases; the right eye had the higher visual acuity in eight cases, the right pupil being the larger in four; the left eye had the higher visual acuity in seventeen cases, the left pupil being the larger in thirteen.

3. The refractive condition of the thirty-five cases was as follows:

Emmetropia	2
Hypermetropia	2
Hypermetropic astigmatism	2
Myopia	11
Compound myopic astigmatism	1
Mixed astigmatism	3
Anisometropia	9
Not recorded	5

The conclusions that may be drawn from this investigation are:

1. Inequality of the pupils is frequent.

2. It is associated with all refractive conditions, with a tendency to be more frequent in myopic conditions.

3. The visual acuity is not affected adversely by the fact that one pupil is slightly larger than the other.

4. The left pupil is more frequently larger than the right.

5. Inequality of the pupils occurs as a physiologic condition.

Tuberculosis Among Industrial Workers

The Medical Research Committee, London, England, has made a study of the effect of occupation on the morbidity and mortality of tuberculosis among industrial workers because of the increase in both, especially among women workers in munition factories (Special Report, Series 22, 1919). While the death rate among certain groups of occupations was unusually high as compared with other occupations, it was felt that it was not so much the occupation itself as the environment and poor hygiene which were responsible for the higher death rate. The incidence of the disease is still too heavy to be explained as a by-product of inferior physique independent of the factory environment itself. The data with regard to the women workers were too insufficient to permit of arriving at any satisfactory conclusions, but statistics from other countries, particularly Germany and Austria, where women have been engaged in heavy occupations for many years, show a higher incidence of tuberculosis among the workers, thus bearing out the observations made thus far in England. The greater incidence of tuberculosis among town dwellers could not be accounted for by the general lowering of health associated with living in cities, whereas industrial employment does account for such an increase because it introduces a special factor making for the development of tuberculosis. Special attention was paid by the committee to factory conditions and the observations made previously by other similar commissions were fully verified and confirmed. A very terse summary of the recommendations of the committee might be made as follows: Improve the hygienic conditions of factories; prevent overcrowding in industrial dwellings; take every precaution to remove and prevent the development of specific trade habits which favor the spread of tuberculosis from person to person; make every effort to enforce the measures of prophylaxis against the disease.

Discussions on Influenza in Japan

An occasional correspondent sends us from Japan the following report of several recent meetings devoted to discussions of the influenza epidemic:

Society of Internal Medicine of Japan.—At a recent meeting of this society, held in Kyotto, R. Miki stated his conviction that Pfeiffer's bacillus is the primary cause of the last influenza epidemic, and that diplococci occur as secondary invaders. Dr. Onodera laid stress on the meteorologic relation of the occurrence of influenza epidemics, the latter running parallel with the severe cold that returns at about thirty year intervals. Dr. Yabe has always found a diminished leukocyte count in cases of influenza. Dr. Tsuneoka found that the disease, as well as vaccine made from the Pfeiffer bacillus, confers immunity.

Society of Hygiene of Japan.—A meeting of this society was held in Tokyo, April 3. Dr. Ishiwara and his associates demonstrated the influenza bacillus in from 45 to 69 per cent. of all cases of influenza and in from 35 to 55 per cent. of the cases of measles, scarlet fever and diphtheria. Therefore, they do not believe that it is the specific cause of influenza.

Pathological Society of Japan.—At a recent meeting of this society, held in Kyoto, Dr. Katsurada stated his belief that the Pfeiffer bacillus is not the specific cause of influenza; nor is a filtrable virus. He has found a micrococcus, however, to which he ascribes an etiologic relationship to influenza.

Alumni Meeting of Kitasato Institute for Infectious Diseases.—At this meeting it was stated that the institute accepts Pfeiffer's bacillus as the cause of influenza and that immunized horse serum is a most efficacious remedy for the disease. An exotoxin produced by the bacillus has been isolated.

Standards for Milk and Cream

Food inspection decision 178, of the United States Department of Agriculture, issued April 17, 1919, promulgates the following definitions and standards for milk and cream, as adopted by the joint committee on definitions and standards July 30, 1917:

1. Milk is the whole, fresh, clean, lacteal secretion obtained by the complete milking of one or more healthy cows, properly fed and kept, excluding that obtained within fifteen days before and five days after calving, or such longer period as may be necessary to render the milk practically colostrum free.

2. Skimmed milk is milk from which substantially all of the milk fat has been removed.

3. Cream, sweet cream, is that portion of milk, rich in milk fat, which rises to the surface of milk on standing, or is

separated from it by centrifugal force. It is fresh and clean. It contains not less than 18 per cent. of milk fat and not more than 0.2 per cent. of acid-reacting substances calculated in terms of lactic acid.

4. Whipping cream is cream which contains not less than 30 per cent. of milk fat.

5. Pasteurized milk is milk that has been subjected to a temperature not lower than 145 F. for not less than thirty minutes. Unless it is bottled hot, it is promptly cooled to 50 F. or lower.

6. Buttermilk is the product that remains when fat is removed from milk or cream, sweet or sour, in the process of churning. It contains not less than 8.5 per cent. of milk solids, not fat.

7. Homogenized milk or homogenized cream is milk or cream that has been mechanically treated in such a manner as to alter its physical properties, with particular reference to the condition and appearance of the fat globules.

Society Proceedings

COMING MEETINGS

New Jersey Medical Society, Spring Lake, June 24-25.
North Dakota State Medical Association, Grand Forks, June 24-25.
Southern Minnesota Medical Assn., Rochester, June 23-24.

SOUTH DAKOTA STATE MEDICAL ASSOCIATION

Thirty-Eighth Annual Session, held at Watertown, May 20-22, 1919

The President, DR. D. L. SCANLON, Volga, in the Chair

Pyelitis

DR. J. P. ISAAC, Freeman: The routes of infection in pyelitis are commonly accepted to be hematogenous, urogenous and by contiguity. While bacteria are always the primary cause, other accessory factors are important. In the diagnosis of pyelitis, a careful study of the urine is essential. Pus and bacteria, especially the colon bacillus, in the urine, together with pain in the flank resembling lumbago, chills and high fever with remissions to the normal without any definite cause should justify the diagnosis of pyelitis. A further diagnostic aid in adults is ureteral catheterization to determine whether it is the kidney, pelvis or the bladder that is involved. In children, ureteral catheterization is not desirable; but the cystoscope may be used to exclude the bladder as the cause of infection. In the treatment of pyelitis, water must be given freely, and in some cases a milk diet for a few days is advisable. Rest in bed for a time is usually indicated. In medication, hexamethylenamin is most frequently used. In advanced cases, pelvic lavage is much practiced.

Catabolins in Disease

DR. B. T. GREEN, Brookings: Nearly every departure from health is complicated to some degree by a toxemia due to the retention in the body of catabolins. These products of retrograde metamorphosis are definite chemical compounds and are mainly tissue poisons.

The extent to which different individuals may be affected by these morbific agents varies greatly. While disease is the usual cause of catabolic toxemia, other factors may produce the condition. Rest reduces the rate of tissue disintegration and permits the emunctory processes to rid the body of the accumulated poisons. On the other hand, weariness results with continued inactivity of brain or muscle. The body fluids stagnate, and catabolins are retained. Prophylaxis consists in the preservation of physiologic balance, and treatment should be directed toward: (*a*) the reduction in the rate of tissue destruction by proper treatment of the disease condition that has increased it; (*b*) the establishing of normal chemical changes by the regulation of physiologic processes; (*c*) the rendering of the reaction of the body fluids normal by indicated corrections in diet or by the administration of acids or alkalis as required, and (*d*) the securing of normal activity of the emunctory organs by proper attention to the existing pathologic condition.

Otolaryngology and the Mortality Rate

DR. J. G. PARSONS, Sioux Falls: Fully 50 per cent. of all deaths are due to tuberculosis, pneumonia, diseases of the kidney, heart and blood vessels, meningitis and a few acute infections, all of which are directly or indirectly concerned with an infection which gains access through the nose and its accessory sinuses and the throat. The presence of chronic pneumococcus, streptococcus and staphylococcus infections makes it possible, under favorable conditions, for pneumonias to develop. Middle ear infections are nearly all secondary to nose and throat infections, and, with their mastoid and intracranial complications, produce 2 per cent. of the mortality. Focal infections, so largely responsible for the death rate in middle life from cardiac, renal, circulatory and organic disease, are found in the tonsils, the nasal accessory sinuses and the ear. Thorough removal and drainage of these focal infections is indicated.

Health Conservation

DR. D. L. SCANLON, Volga: Properly to conserve the health of the people we must have a thoroughly organized corps of expert public health workers, supported by an adequate appropriation. I recommend that a commission on public health be appointed by the governor for the purpose of studying the needs of our state and thus offering a tangible basis for the necessary legislative action. A matter of such importance as this is worthy of mention in a message from the governor to the legislature.

Leukocyte Count in Chronic Tonsillar Infections

DR. J. M. WALSH, Rapid City: Among 200 cases, only two patients at the time of operation had a white blood count of less than 10,000. The highest white blood count was 38,000. Twelve had a count of 25,000 and more. The postoperative count in every case was lower than 9,000.

Operation for Acute and Subacute Mastoiditis

DRS. H. I. LILLIE and R. A. BARLOW, Rochester, Minn.: In cases of definite mastoiditis, operation is indicated reasonably early. The mortality is practically nil. Preservation of the hearing function is fairly certain. A second operation should not be necessary, except for a complication, such as sinus thrombosis or brain abscess.

Myomectomy Versus Hysterectomy

DR. E. O. GIERE, Watertown: In the woman past the age of 45 it is doubtful if myomectomy offers a single advantage over hysterectomy. On the other hand, myomectomy carries with it certain distinct disadvantages which must not be ignored, regardless of the age of the patient. Myomectomy does not make recurrence impossible. Myomectomy leaves possible the occurrence of malignancy. Considering the advantages and disadvantages of both operations, it does not appear justifiable to make myomectomy the operation of choice as a general rule in dealing surgically with myoma of the uterus. Myomectomy should be limited to patients in the child-bearing period; and the younger the woman, the more urgent should be this particular operation and, exceptionally, to women of any age where the tumor is single and pedunculated, provided there is a reasonable assurance that there may not be present small, undeveloped growths, and where malignancy can be ruled out beyond a question of doubt.

Treatment of Empyema

DR. ARTHUR T. MANN, Minneapolis: In the army hospitals, where comparatively large numbers of empyemas could be given intensive study, it was soon found that early operation led to a high mortality. These men, as a rule, were already so ill from the influenza and from an extreme toxic condition accompanying the pneumonia which preceded the empyema that they were not able to withstand the shock of the operation and of the pneumothorax which accompanied the operation. These experiences quickly led to aspiration of the early cases of empyema and to repeated aspirations, as often as seemed necessary, until such a time as the

patients were in a condition to undergo an operation with every reasonable chance of success. A drop in the mortality, more than could be accounted for by a decrease in the virulence of the infecting organism, was immediately noted. In fact, it was noticed that some patients got well under the aspiration treatment, though the majority of them still came to operation.

At the base hospital at Camp Dodge we undertook the problem of trying to sterilize the infected fluid accumulations and the forming pus at the time of the aspirations. This we did by injecting from 1 to 2 ounces of an active antiseptic fluid at the end of each aspiration. We used three different preparations in this work, namely, surgical solution of chlorinated soda, dichloramin-T and the 2 per cent. solution of liquor formaldehyd in glycerin. The first gave the best results; therefore we discontinued the other two. In selecting the proper time for operation, one must take into consideration the general toxic condition of the patient and the stage of the pneumonia. As a rule, an open operation should not be done until after the crisis is past and the affected areas are undergoing resolution. After watching the good effects of early aspiration in reducing the mortality in the cases which came to operation later when the patient's condition had improved and the pus had become too thick to be withdrawn properly through the aspirating needle, the impression was created that the method of Mozingo would be an improvement on the open method of operation which provides for drainage of pus, but which allows more or less collapse of the lung from the pneumothorax. I am enthusiastic about the method.

Medical Treatment of Gastric Ulcer

DR. OWEN KING, Aberdeen: The first and one of the most important things in the successful treatment of gastric ulcer is absolute rest in bed for a period of at least three weeks. This lessens the gastric secretions, thus promoting a more rapid emptying of the stomach. The action of hydrochloric acid on the raw surfaces causes a spasmodic action of the pylorus and hence inhibits the normal emptying of the stomach. The principle of medical treatment is to produce conditions in the stomach in which the stomach contents are neutral or alkaline in reaction in order to remove the irritation at the pylorus. When this condition is obtained and the stomach can empty in a normal period, Nature will heal the ulcer if properly aided. Every case treated surgically should be followed by appropriate medical treatment in order to give the ulcer every oportunity to heal. I do not say that every case of peptic ulcer will respond to medical treatment. There are, no doubt, cases of marked pyloric obstruction from old scar tissue of healed ulcers, and these patients must have surgical treatment. There is an actual mortality of from 3.5 to 4 per cent. in gastro-enterostomy under the best surgeons, and 10 per cent. mortality with the average surgeon, while in the medical treatment there is practically no mortality.

Surgical Treatment of Gastric Ulcer

DR. R. L. MURDY, Aberdeen: Surgical treatment in the hands of a skilful surgeon gives less mortality than medical treatment. Timely surgical treatment will avert the fatal complications and prevent morbidity in a very large percentage of cases. Excision of the ulcer takes the operation out of the realm of simplicity and adds materially to the danger without securing sufficient compensating advantages to justify the measure. The occasional excision, particularly in deep infiltrated and chronic ulcers with a cancerous tendency and in some others, is desirable and urgent. The location of the ulcer, together with local and general conditions, will also, in a measure, determine the advisability of excision. Ulcers on the greater curvature of the stomach and near the pylorus that can be brought under the alkaline secretions of the duodenum show a greater tendency to heal spontaneously after gastro-enterostomy than those that cannot be alkalized. The observation of Dr. Charles H. Mayo, that gastro-enterostomy greatly lessens the acid of the stomach, and that cancer seldom occurs where the tissues are bathed in this alkaline secretion, can be put to practical use in this connection.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Journal of Insanity, Baltimore

April, 1919, **75**, No. 4

Work of Psychiatrists in Military Camps. E. S. Abbot.—p. 457.
Nursing Problem as Related to Psychopathology. R. Dewey, Wauwatosa.—p. 467.
Community Mental Health Movement and Its Probable Dependence for Success on a Higher State Hospital Standard for Ward Employees. S. D. Wilgus, Rockford.—p. 473.
Symbolism and Synesthesia. F. L. Wells, Waverly, Mass.—p. 481.
Psychoses in Mental Defects. A. Gordon, Philadelphia.—p. 489.
*Correlation Between Mental Defect and Anomalies of Hard Palate. I. Case, Chicago.—p. 501.
*Correlation of Neurology, Psychiatry, Psychology and General Medicine as Scientific Aids to Industrial Efficiency. J. D. Ball, Oakland.—p. 521.

Correlation Between Mental Defect and Anomalies of Hard Palate.—The analyses of cases examined by Case and others shows that because the palate is imperfect, it does not necessarily follow that mentality is imperfect, i. e., there is no necessary connection between the degree of mental capacity and a high palate.

Correlation of Neurology, Psychiatry, Psychology and General Medicine as Scientific Aids to Industrial Efficiency.—Ball is of the opinion that the establishment of medico-psychologic laboratories as the principal department of employment bureaus of every large industrial organization would be an economic asset and desirable. The establishment of a central employment clearing house with medico-psychologic laboratory which would act for groups of industrial organizations too small to economically conduct their own bureaus is suggested.

American Journal of Physiology, Baltimore

May, 1919, **48**, No. 4

*Epinephrin from the Suprarenals Not Indispensable. G. N. Stewart and J. M. Rogoff, Cleveland.—p. 397.
*Gastric Response to Foods: II. Fractional Study of Coagulation of Milk in Human Stomach. O. Bergeim, J. M. Evvard, M. E. Rehfuss and P. B. Hawk, Philadelphia.—p. 411.
*Mechanism of Absorption from Intestine: I. Colon. One-Sided Permeability of Intestinal Wall to Chlorids. S. Goldschmidt and A. B. Dayton, Baltimore.—p. 419.
*Id. II. Colon. Passage of Fluid in two Directions Through Intestinal Wall. S. Goldschmidt and A. B. Dayton, Baltimore.—p. 433.
*Id. III. Colon. Osmotic Pressure Equilibrium Between Intestinal Contents and Blood. S. Goldschmidt and A. B. Dayton, Baltimore.—p. 440.
*Id. IV. Colon. Behavior of Sodium and Magnesium Sulphate Solutions. S. Goldschmidt and A. B. Dayton, Baltimore.—p. 450.
*Id. V. Colon. Effect of Sodium Sulphate on Absorption of Sodium Chlorid when Salts are Introduced Simultaneously into Intestine. S. Goldschmidt and A. B. Dayton, Baltimore.—p. 459.
*Id. VI. Colon. Influence of Calcium Salts on Absorption of Sodium Chlorid in Intestine. S. Goldschmidt and A. B. Dayton, Baltimore.—p. 173.
*Biologic Relation of Diastase Ferment between Maternal Blood, Fetal Blood and Amniotic Liquid of Animals. H. Kito, Tokyo.—p. 481.
Synergy and Antagonism of Sodium Salts in Barium Stimulation. W. D. Zoethout, Chicago.—p. 497.
*Antineuritic Vitamin in Wheat and Corn Kernel. C. Voegtlin and C. N. Myers, Washington.—p. 504.
*Pressure Changes in Cerebrospinal Fluid Following Intravenous Injection of Solutions of Various Concentrations. L. H. Weed and P. S. McKibben, Baltimore.—p. 512.
Experimental Alteration of Brain Bulk. L. H. Weed and P. S. McKibben, Baltimore.—p. 531.

Epinephrin from the Suprarenals Not Indispensable.—Stewart and Rogoff found that in dogs and monkeys, as previously shown for cats and rabbits, the liberation of epinephrin from the suprarenals is not indispensable for life and health.

Gastric Response to Food.—The subject of the experiments reported by Bergeim et al. was a normal man, 31 years of age, who had the unique ability to deliver samples of stomach contents at will. Not only could this man completely empty his stomach at any desired stage in the process of digesiton but he could also give small samples at short intervals throughout the entire gastric cycle, so that a fractional

examination of his stomach contents could be made. Milk drunk rapidly left the stomach sooner and produced a smaller curd mass than milk drunk slowly or "sipped." Raw whole milk formed firm white curds which had "rubberlike" characteristics. The maximum curd formation took place at about one hour after the milk had entered the stomach. These large curds were apparently formed through the coalescing of numerous smaller curds. At this period curds as large as a man's thumb and weighing at least 15 grams may be formed. Milk which had been boiled five minutes curded in an entirely different manner. In this case the curds were small, soft, flaky and of a yellow color. The largest curds were about the size of a small pea. These curds left the stomach sooner and were much more digestible than the tough curds resulting from the ingestion of the raw milk. Dietetically, therefore, boiled milk is to be preferred to the raw product. Particularly tough, hard curds of large size were formed in the human stomach after the entrance of raw skimmed milk. When the skimmed milk was boiled, the resulting curds were not as large and tough as were those of the raw skimmed milk nor as small and soft as were the curds of boiled whole milk. The addition of 2.5 gm. of sodium bicarbonate to 500 c.c. of raw whole milk caused the formation of curds which were smaller and softer than those produced in similar milk in the absence of bicarbonate. There was a definite curd formation at five minutes although the stomach content remained alkaline for thirty minutes. That the bicarbonate treatment was not as effective as was boiling in producing small soft curds was shown by the fact that the curds of the boiled whole milk were smaller and softer than were the curds in the milk after bicarbonate had been added. The boiled milk also left the stomach sooner than the bicarbonate milk. As a general rule, the character of the milk curds was influenced in a very direct way by the fat concentration, i. e., the more fat the less curd. Not only was there less total curd formation but the curds which were formed were smaller and softer the higher the fat concentration. In fact, when 40 per cent. cream was drunk no curds were formed during the first half hour and even then the largest curds were only about the size of the head of a pin and they did not coalesce to form larger curds as was the case in milk of low fat content. The milks of high fat concentration were also very slow to leave the stomach.

Mechanism of Absorption from Intestine.—The apparent property of the intestine of passing dissolved substances in but one direction has been especially difficult of interpretation. This seeming power of the intestine to direct the stream of dissolved substances through the intestinal wall in but one direction, has been a subject of much investigation. Experiments were made by Goldschmidt and Dayton to determine this matter. They found that the colon is not characterized by a strictly one sided permeability. There is a threshold of the colon, below which chlorids diffuse from the blood stream into the intestinal contents. The blood content of chlorids is a factor in determining the height of this threshold. The chlorids diffusing into distilled water or very low concentrations of sodium chlorid in the colon have their origin in the blood.

Id.—Hypertonic solutions of sodium chlorid which readily pass through the intestinal wall were seen to attract fluid into the intestine above a certain threshold value, approximately 1.20 per cent. with a Δ of 0.786. At the same time chlorids pass in concentrated solutions into the blood. The concentration of the solute (sodium chlorid) and the Δ at the threshold point, that is the point at which the fluid balance just ceases to be in favor of the colon, shows a striking constancy in a long series of experiments. There is evidence that increased blood chlorids may effect this threshold value.

Id.—Solutions of sodium chlorid above or below blood level come into a chlorid partial pressure equilibrium with the blood. Increase of blood chlorids affects this equilibrium. There is an attempt at total osmotic pressure equilibrium between the colon contents and the blood. Evidence is at hand which indicates the other blood constituents diffuse into sodium chlorid solutions in the colon. This is more apparent as the concentration of the solution approaches the level of the blood chlorids.

Id.—The colon behaves toward solutions of sodium sulphate essentially like a semipermeable membrane. Water is absorbed from hypotonic solutions, and the increases to blood level. With hypertonic solutions the volume increases, the concentration decreases and the Δ approaches blood level. Solutions of concentration nearly iso-osmotic with the blood show little change in volume and the Δ closely approximates that of the blood. Hence, there is free passage of water with pracically no diffusion of sulphae. The deficit of sodium sulphate is very small and bears no constant relationship to the total amount of sodium sulphate introduced, nor is it dependent on the length of stay in the colon, and therefore seems to be due to adsorption rather than to diffusion. Magnesium sulphate shows even less absorption from the colon than sodium sulphate. The failure of absorption of these salts from the colon emphasizes the specific importance of the large intestine in saline cathasis.

Id.—When sodium sulphate or magnesium sulphate is added to solutions of sodium chlorid and introduced into the colon, the concentration of chlorids diminishes rapidly and the amount present approaches a zero point. The concentration of sodium or magnesium sulphate approaches a value of a concentration equi-osmotic with the blood. The final Δ of the solution approximates that of the blood. Less chlorids diffuse into weak solutions of sodium sulphate than into distilled water and this amount decreases with increasing concentration of sodium sulphate. Sodium sulphate speeds the rate of absorption of sodium chlorid through the colon wall when the two are introduced simultaneously. This increases with increasing concentration of the sulphate. It occurs in hypotonic as well as in hypertonic solutions. After sodium sulphate has been present in the intestine the subsequent absorption of sodium chlorid and water to some extent increases. It is never decreased. Other factors such as mechanical washing, introduction of various strengths of sodium chlorid, notably distilled water, do not affect the subsequent absorption of sodium chlorid or fluid in the colon. Analogies of the effect of sodium sulphate on chlorid, in other parts of the body, are presented from the literature.

Id.—Calcium lactate in increasing concentrations first accelerates, then inhibits the absorption of chlorids from solutions of sodium chlorid in the colon. There is an indication that this action bears a relationship to the ratio of calcium to chlorine. The first stage of the action of calcium lactate on sodium chlorid resembles that of sodium sulphate on the salt. The last stage presents the opposite effect to that of sodium sulphate.

Blood Diastase and Placental Function.—When the blood vessels of the kidneys are tied or when nephritis is caused by the injection of uranium, a retention of diastase in the maternal blood is produced and there is an increase of diastase in the fetal blood. In the case of nephritis after the injection of uranium, there is no change in the quantity of diastase in the amniotic liquid. When takadiastase and pure glucose are injected simultaneously into the vein, blood sugar increases both in the maternal and fetal bodies, but no change is produced in the amniotic liquid and there is no change in the diastase of the maternal blood, but we find a little increase of it in the fetus and in the amniotic liquid. From the above facts the authors conclude that the placenta is permeable to the diastase ferment. They do not explain the reason why the diastase ferment passes into the amniotic liquid while sugar does not. In the case of the parenteral injection of a ferment it is lost in the animal body, which seems to be due not to the toxic influence of the ferment or to the regulation of the placenta, but to the regulating function of some other part of the body. As regards the origin of the amniotic liquid, there are many complicated relations, and it is difficult to explain it by the simple results of the present experiments.

Antineuritic Vitamin in Wheat and Corn Kernel.—According to Voegtlin and Myers the germ or embryo of the wheat and corn kernel contains all of the antineuritic vitamin of these cereals. Wheat flour or corn meal containing the germ

is, therefore more nutritious than the corresponding highly milled products. Consideration of the distribution of the antineuritic substance in the wheat and corn kernel and in the animal body suggest that this accessory food is necessary for the metabolism of the growing plant as well as the animal body. It appears that cells with an especially active metabolism are also rich in antineuritic vitamin.

Cerebrospinal Fluid Pressure.—Weed and McKibben claim that intravenous injections of Ringer's solution cause no lasting change in the pressure of the cerebrospinal fluid. Intravenous injections of hypotonic solutions (distilled water) are followed by a marked and sustained rise in the pressure of the cerebrospinal fluid. Intravenous injections of hypertonic solutions (concentrated sodium chlorid, sodium bicarbonate, sodium sulphate and glucose) cause initial rise in the pressure of the cerebrospinal fluid followed immediately by marked fall in this pressure, often to below zero.

American Journal of Roentgenology, New York City

May, 1919, **6**, No. 5

Hemorrhagic Pneumonitis. J. H. Selby.—p. 211.
*Roentgen-Ray Study of Epidemic Influenza and Bronchopneumonia. J. A. Honeij, New Haven.—p. 226.
*Complications of Influenza from Roentgenologic Standpoint. R. H. Boggs, Pittsburgh.—p. 239.
Caldwell Portable Roentgen-Ray Outfit. C. N. Moore, Schenectady. —p. 243.

Roentgen-Ray Study of Epidemic Influenza and Bronchopneumonia.—Twenty-eight cases of influenza and pulmonary congestion were studied by Honeij by serial roentgenography. The examinations varied in number from one to ten. In the case of influenzas and congestions these examinations often were taken every day while the bronchial changes progressed, until the patient recovered, or until a pneumonic process developed, examination being less frequent after a definite diagnosis of the process was made. In the case of a pneumonia being diagnosed on first examination, repeated examinations were then made to determine the progress of the disease until the final stage had been reached. A detailed report is given of the findings in these cases.

Complications of Influenza from Roentgenologic Standpoint.—According to Boggs the roentgen rays as a means of diagnosing and recording the changes in the lungs and pleura are not directly diagnostic; but when compared with inspection, palpation, percussion and auscultation they yield much more accurate information than can be obtained by physical signs alone. It is a more accurate method than percussion alone, because even deep percussion is not accurate more than 2½ inches below the surface, and the density in the lungs and pleura can be compared better with the normal surrounding or adjacent organs and tissue. Stereoscopic plates taken anteriorly and posteriorly show the density and thickness of a pneumonic lung or a layer of fluid in the pleural cavity. By knowing the thickness and density of the pathologic lesion in the lung or pleura, or both together, with its position, one can usually tell what kind of breathing is heard by the stethoscope. The fluoroscope is a valuable aid to the roentgenologist for chest examinations in showing that much of the function of the lungs is disturbed by the pulmonary disease; but it cannot take the place of a good pair of stereoscopic plates taken posteriorly and anteriorly.

Boston Medical and Surgical Journal

June 5, 1919, **180**, No. 23

Reflections of a Physician Who Stayed at Home. S. Crowell, Dorchester.—p. 629.
*Influenza and Streptococcus Hemolyticus. D. B. Medalia, A. E. F. —p. 635.
Survey of 100 Cases of Drug Addiction Entering Camp Upton, N. Y., Via Draft, 1918. G. E. McPherson, Medfield, Mass., and J. Cohen, New York.—p. 636.
Two Cases of Fracture of Clavicle. F. E. Peckham, Providence, R. I. —p. 641.
Progress of Orthopedic Surgery. C. H. Bucholz, Boston.—p. 643.

Influenza and Streptococcus Hemolyticus.—In the laboratory of General Hospital No. 14 there came up the question of what could be the cause of a number of undiagnosed pyrexias, which ran a course of a few days and then dropped down to normal and stayed normal. With the temperature there was also a slight irritation of the throat. The bacillus "influenza" was present in great quantities in case after case. A majority of men operated on for appendicitis acquired a primary infection of streptococcus. One set of cultures proved to be valuable, and that was a set made from the wall of one of the operating rooms. It contained *Streptococcus hemolyticus*. The habit in that hospital was to have a number of adhesive plasters cut and stuck to the wall of the operating room. After the patient was operated on, sterile pads were put on the wound and the strips of adhesive plaster from the wall were put on to hold the dressing. It was concluded that the infection was introduced by the adhesive plaster from the wall. The walls were washed and repainted and the habit of sticking adhesive strips to them was stopped. The almost postoperative epidemic ceased.

Bulletin Canadian Army Medical Corps

May, 1919, **1**, No. 8

*Chronic Septic Inflammation in Bone Following Gunshot Wound. W. E. Gallie.—p. 106.
*Tuberculosis As a Causative Factor in Disordered Action of Heart. H. R. Macintyre.—p. 112.
Extension in Compound Fractures of Tibia and Fibula. C. E. Preston. —p. 114.
*Comparison of Kolmer's Modification of Original Wassermann Test and No. 4 Method as Recommended by Medical Research Committee. N. O. Thomas and K. M. B. Simon.—p. 116.
*Postmortem Findings and Bacteriologic Examination of Seventy-Three Cases of Pneumonia Supervening on Influenza. T. R. Little.—p. 117.
Diphtheroids in Case of Influenza Showing at Necropsy a Single Kidney. Case of Right Dystopic Kidney. E. Fidlar.—p. 118.
*Roentgen-Ray Examination of Liver in Cases of Arsenic Poisoning and Jaundice. G. S. Strathy and L. Gilchrist.—p. 120.
*Nephritis in Returned Soldier. A. H. McCordick.—p. 122.
Cardiac Disturbances in Returned Soldier. C. C. Birchard.—p. 123.
Utilization of Food Waste in Canadian Hospitals. I. D. Carson.—p. 124.
*Anomaly of Fundus Oculi. S. H. McKee.—p. 125.

Chronic Septic Inflammation in Bone Following Gunshot Wound.—In the presence of nonunion, the fact that the wound is septic, Gallie says, is not a contraindication to active treatment of the fracture as well as of the osteomyelitis. Gratifying results may be anticipated from thorough freshening of the ends and adjusting of the fragments, providing efficient drainage is secured. The best time to correct malunion in septic cases is at the time of the operation for the cure of the disease in the bone.

Tuberculosis as Causative Factor in Disordered Action of Heart.—The subcutaneous tuberculin test was done by seven medical officers in 300 unselected cases of disordered action of the heart and the results are reported by MacIntyre. Positive reactions were obtained in thirty-two cases; negative reactions in 268 cases and local reactions only in ninety-seven cases.

Comparison of Wassermann Tests.—One hundred and seventeen serums in all were tested by Thomas and Simon, the two tests being performed side by side with the same gross complement, amboceptor and washed sheep's corpuscles; all serums were inactivated at the same time and the tests performed under similar conditions of temperature and pressure, in this way eliminating sources of error as much as possible. Ninety serums gave negative reactions with both methods. Twenty serums gave a strongly positive reaction, i. e., complete inhibition of hemolysis with clear supernatant fluid in both tests, and in no case did a serum give a strongly positive reaction with Kolmer's method and not so in the test as described in No. 4 standard method. In only one case was a serum slightly positive or doubtful in one and negative in the other. In no case was there marked divergence in the results; in only four out of 120 cases was there a slight difference in the readings of the two methods. In long treated cases serums tested by No. 4 method give a more delicate reaction. The authors believe that the varying number of units of complement used in No. 4 method tend to eliminate sources of error by nonspecific complement fixation.

Postmortem Findings and Bacteriologic Examination of Influenzal Pneumonia.—A small gram-positive diplococcus

was found by Little in the lung sixty-two times, in the spleen nine times and in the heart's blood twenty-three times. It was the predominating organism, and is regarded by the author as of etiologic significance, especially in pneumonia supervening on influenza. He suggests that it is probable that the initial infection of the upper air passages is due to the *B. influenzae*, and the graver complications are due to the small gram-positive diplococcus as an intermediate type between the pneumococcus and streptococcus. It differs from both in animal experimental inoculations. It did not agglutinate the three types of pneumococcus serum in a higher dilution than 1 in 10. It was the only organism found in pure culture. Little is satisfied from animal experiments that a vaccine prepared from it proves of prophylactic value. There was no systemic effect; there was, however, a slight local reaction at the site of inoculation.

Roentgen-Ray Examination of Liver in Arsenic Poisoning and Jaundice.—The angle formed by the junction of the liver and vertebral shadows on the right side is usually a right angle. Less frequently it is an obtuse angle. Nine of ten cases of acute liver atrophy examined by Strathy and Gilchrist showed the upper surface of the liver more dome shaped than normal and the liver vertebral angle an acute angle. The atrophy of the liver was due to arsenic poisoning in seven of the cases and to catarrhal jaundice in the other three. In the leftsided pleural effusions and marked cardiac hypertrophy the liver vertebral angle tends to be somewhat acute, but the shadow of the liver is not more dome shaped than normal. The angle in these cases is due to pressure on the left lobe of the liver slightly tilting the organ.

Nephritis in Returned Soldiers.—McCordick and Robbins analyzed 2,400 records of returned soldiers. In only seventeen instances was there no record of any urinary examination. There were eighty-seven cases of nephritis in only three of which was the nephritis a definite complication of other conditions (tuberculosis and syphilis). A preexisting nephritis was suspected from the history in seven cases. Nine men had seen service only in England, never having gone to France. Sixty-eight soldiers had seen active service in France. These sixty-eight cases were definite cases of so-called trench, or war nephritis. According to the authors this so-called "war nephritis" is mild in type; runs an inoffensive course; produces no serious cardiovascular changes; does not destroy kidney structure to any extent; and 50 per cent. of the cases, at least, progress favorably to a cure.

Anomaly of Fundus Oculi.—On examining the right fundus of a soldier, the picture seen by McKee was as follows: At the area of the optic disk instead of the disk was a rectangular pearly white membrane, attached by bands to the retina at each coroner except at the superior temporal. This membrane hung in front of the retina like a curtain. It was a good deal larger than the normal optic disk, and at the superior temporal corner slightly more than 1 millimeter from the underlying retina. On the superior border the artery ran along to the temporal part with numerous branches extending to the area above. To the nasal side and below the vessels were also profuse. About this membrane there were seen pigmentary changes denoting almost a complete rupture of the choroid. There were also one or two areas of displaced pigment in other parts of the retina.

Georgia Medical Association Journal, Atlanta

April, 1919, **7**, No. 12

Analysis of Six Brain Cases. H. Crenshaw, Atlanta.—p. 226.

Journal of Cutaneous Diseases, Chicago

May, 1919, **37**, No. 5

Roentgen-Ray Treatment of Tinea Tonsurans. H. H. Hazen, Washington, D. C.—p. 307.
*Eczema in Infants and the Thyroid. M. L. Ravitch and S. A. Steinberg, Louisville.—p. 313.
*Case of Atypical Scabies. D. W. Montgomery, San Francisco.—p. 317.
Clinical Types of Lichen Planus. J. A. Fordyce and G. M. MacKee, New York.—p. 320.

Eczema in Infants.—The type of infantile eczema which Ravitch and Steinberg think is due to disturbed thyroid secretion does not differ much from other infantile eczemas, except that it is always a dry eczema. The skin is harsh and rough; there may be sweating but no fatty or oily secretion seems to be present. The treatment consists in the administration of iodin, iodid or thyroid gland.

Atypical Scabies.—Montgomery's patient had a minutely vesicular eruption on the sides of the fingers, some scratch lesions on the arms and in the axilla, a finely granular crusted eruption in the supramental groove, which, with the lens, was seen to be also minutely vesicular, and an intense, generalized, sleep-robbing pruritus. The vesiculation on the fingers and face recalled a plant poisoning but the patient denied exposure. Scabies was next considered, but there was no pustulation. There were no lesions between the fingers nor on the front of the wrists, nor on the immediately adjacent portion of the palms which are so frequently affected. The axillae were itchy, but almost entirely free of eruption. The nipples were also itchy, but did not even look irritated. No other member of the family suffered from the same complaint. The lesion on the thumb was examined microscopically in glycerin, and the cuniculus provided with acarus eggs and feces was easily demonstrated. The diagnosis of scabies was fixed beyond a doubt.

Kentucky Medical Journal, Bowling Green

June, 1919, **17**, No. 6

Examination of Chest for Tuberculosis. E. Barr, Owensboro.—p. 241.
Acute Abdomen. M. Casper, Louisville.—p. 243.
Influenza. B. C. Frazier, Louisville.—p. 250.

Maine Medical Association Journal, Portland

May, 1919, **9**, No. 10

Physiology of Digestion. J. S. Jamieson, Portland.—p. 269.
*Endermic Vaccination Against Smallpox. W. S. Walsh, West Pownal.—p. 280.
Case of Lethargic Encephalitis. J. F. Shaw, F. H. Bartlett, Fairfield.—p. 284.

Endermic Vaccination Against Smallpox.—This method was used exclusively in 280 vaccinations at the Maine School for Feebleminded with satisfactory results. Of the 280 vaccinations, 174, or 62.11 per cent., were successful. Of the 106 failures, eighty-two, or 29.27 per cent., had typical scars resulting from previous vaccinations. One of the failures had smallpox some years ago. Twenty-three, or 8.21 per cent., had never been vaccinated successfully before and failed on this occasion. Only thirty-six, or 12.85 per cent., among 174 successes had scars. In Walsh's opinion the endermic method of vaccination is the best of all the methods. The comparative freedom from complications is apparently a marked feature of this method.

New Orleans Medical and Surgical Journal

June, 1919, **71**, No. 12

Recollections of War in Europe. L. J. Genella, B. E. F.—p. 493.
Bronchopneumonia Following Measles. S. F. Braud, New Orleans.—p. 512.

New York Medical Journal, New York

June 7, 1919, **109**, No. 23

Acute Diverticulitis of Colon. J. F. Erdmann, New York.—p. 969.
N. C. A. Neurocirculatory Asthenia. J. H. Barach, Pittsburgh.—p. 972.
Malingering. C. Pope. Louisville.—p 975
Rôle of Erythrocytes and Leukocytes During Health and Disease. A. C. Geyser, New York.—p. 978.
*Chronic Appendicitis with Special Reference to Obscure but Constant Syndrome. P. G. Skillern, Jr., Philadelphia.—p. 982.
Control of Syphilis. R. C. Jamieson, Detroit.—p. 984.
Hookworm. W. A. Wovschin, New York.—p. 988.
New Hypodermic Syringe and Needles. A. Kahn, New York.—p. 990.
Prophylaxis and Treatment of Influenza. L. T. de M. Sajous, Philadelphia.—p. 992. Cont'n.
War Neuroses and Their Lesson. T. W. Salmon, New York.—p. 993.

Syndrome of Chronic Appendicitis.—The outstanding feature of this syndrome discussed by Skillern is constipation, obviously due to retarded motor activity of the bowel, fatigued peristalsis or intestinal stasis. The ascending colon becomes fagged out. No adhesions were present in this series, the appendix was not even kinked, and the patients recovered after simple removal of the appendix.

New York State Journal of Medicine, New York

May, 1919, **19**, No. 5

Congenital Malformations of Spine. C. D. Ried, Syracuse.—p. 161.
Rôle of Anesthetist on Surgical Team. J. J. Beuttner, Syracuse.—p. 164.
Dynamics of Abdominal Hernia. H. R. Trick, Buffalo.—p. 166.
Care of Children Before and After Tonsillectomy. C. H. Smith, New York.—p. 168.
Sterility. G. M. Gelser, Rochester.—p. 174.
Motherhood. R. W. Lobenstine, New York.—p. 177.
Care of Premature Child in Homes. H. Schwarz, New York.—p. 180.
Longitudinal Sinus; Its Adaptability in Procuring Blood for Diagnosis; Its Use in Transfusion of Blood, and for Diagnostic Purposes; An Ideal Method in Infancy. L. Fischer, New York.—p. 183.
Case of Perversion of Appetite with Unique Complications. A. W. Benson, Troy.—p. 185.
Recent Advances in Bacteriologic Diagnosis of Pneumonia. O. W. H. Mitchell, Syracuse.—p. 188.
Office of Chief Medical Examiner; Its Relation to Public, District Attorney's Office and Medical Profession, C. Norris, New York.—p. 189.
Use of Colloidal Gold Test in Public Health Work. W. E. Zielinski, Buffalo.—p. 195.

South Carolina Medical Association Journal, Greenville

May, 1919, **15**, No. 5

Results of Influenza with Special Reference to Eye, Ear, Nose and Throat Diseases. L. O. Mauldin, Greenville.—p. 441.
Value of Biologic Principles in Surgical Practice. J. S. Horsley, Richmond.—p. 445.
Interesting Aspects of the Recent Epidemic of Influenza. J. H. Gibbes, Columbia.—p. 453.
Treatment of Morphinism. H. Crenshaw, Atlanta, Ga.—p. 459.

Southwest Journal of Medicine and Surgery, El Reno

May, 1919, **27**, No. 5

Acute Postoperative Dilatation of Stomach. J. E. Gilcrest, Gainesville, Texas.—p. 93.
Culturing Balantidium Coli. A. J. Hinkelmann, Oklahoma City.—p. 99.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

British Medical Journal, London

May 17, 1919, **2**, No. 3046

Medical Tradition. J. Tweedy.—p. 597.
**"Filter-Passing" Virus in Polyneuritis, Encephalitis, Trench Fever, Influenza and Nephritis. J. R. Bradford.—p. 599.
Experimental Reproduction of Influenza, Nephritis and Encephalitis. E. F. Bashford.—p. 601.
*Bacteriology of Certain "Filter-Passing" Organisms. J. A. Wilson.—p. 602.
*Ulceromembranous Laryngitis of Streptococcic Origin. J. A. M. Hemmeon.—p. 604.
Shell Wound of Left Side of Neck: Injury of Great Vessels and Division of Vagus Nerve: Recovery. G. Bell.—p. 604.
Jaundice: With Special Reference to Types Occurring During War. W. H. Willcox.—p. 605.

"Filter-Passing" Virus in Certain Diseases.—Bradford claims that Koch's postulates have been fulfilled in six maladies, polyneuritis, lethargic encephalitis (or encephalitis more broadly), trench fever, influenza, nephritis and rabies. In a considerably larger group only the bacteriologic evidence of the obtaining by culture of a virus is reported. These maladies are: mumps, measles, rose measles, typhus, scarlet fever, hemorrhagic chickenpox and vaccinia.

Bacteriology of Certain Filter-Passing Organisms.—Wilson describes the technic followed in studying these organisms found in polyneuritis, encephalitis, influenza, trench fever, nephritis and rabies.

Ulceromembranous Laryngitis of Streptococcic Origin.—Fifty cases are analyzed by Hemmeon. Out of fifty cultures, thirty-five showed streptococci in almost pure growth; ten showed the same as the prevailing organism, and the remainder were indefinite. Of the thirty-five streptococcic growths, twenty-five were classified as *Streptococcus hemolyticus* and ten were *S. viridans*. Further subdivision of these groups was not attempted.

Dublin Journal of Medical Science

May, 1919, **9**, No. 5

Skin Stains on Hair Dyes. W. G. Smith.—p. 197.
Cases of Lethargic Encephalitis. J. O'Carroll and G. Nesbit.—p. 206.
Alternation of Generations and its Bearings on Cancer. J. Beard.—p. 217.

Glasgow Medical Journal

May, 1919, **9**, No. 5

Complications of Influenza Treatment. J. Henderson.—p. **257.**
Cases of Gunshot Injury to Head. J. A. Wilson.—p. 278.

Journal of State Medicine, London

May, 1919, **27**, No. 5

Infection and Disinfection in War Time. J. M. Beattie.—p. **129.**
Lesions of the 1918 Influenza Epidemic. C. Carnwath.—p. 142.

Lancet, London

May 17, 1919, **2**, No. 4994

*Rôle of Sympathetic Nervous System in Disease. W. L. Brown.—p. 827.
War Neurosis: Comparison of Early Cases Seen in Field with Those Seen at the Base. W. Brown.—p. 833.
Temperature Environment and Thermal Debility: Study of Beneficial and Injurious Effects of Heat. C. F. Sonntag.—p. 836.
*Action of Flavine and Its Derivatives. A. H. Tubby, A. R. Ferguson, T. J. Mackie and L. F. Hirst.—p. 838.
Infective Scar Tissue and Its Relation to Pains: Particularly Painful Amputation Stumps. E. M. Corner.—p. 840.
Quinin as an Abortifacient. W. C. Swayne, and E. Russell.—p. 841.
Case of Acute Ascending Paralysis. H. Sutherland.—p. 841.
*Ruptured Rectus Abdominis, Influenzal: Operation; Recovery. W. Balgarnie.—p. 843.
Case of Acute Appendicitis; Suppurative Pylephlebitis; Recovery. R. A. Barlow.—p. 844.

Rôle of Sympathetic Nervous System in Disease.—Brown contends that the stimulation of the sympathetic and of its coadjutors, the suprarenals and thyroid, means the spending of reserves in the supreme struggle for survival. The quickening of all the vital processes may produce, for all time, a feeling of exaltation and well being. This may be regarded as a physiologic justification for Nietsche's injunction to live dangerously. But exhaustion lies in wait if the struggle is unduly prolonged. A vicious circle is the pathologic equivalent of a prolonged struggle. Next, under physiologic conditions the sympathetic acts as a whole, while one of the phenomena of disease is dissociation. Sensory dissociation is seen, for instance, in tabes and syringomyelia. Sympathetic dissociation may play a part in diabetes and in disorders of digestion and circulation. The general plan of the sympathetic and its general action in assisting the struggle for existence is discussed. Evolved in a subconscious plane, it remains forever beyond the control of the will. The higher centers of the brain show their influence on the lower chiefly in the direction of inhibition. Brown says that the highest organism is the most self-controlled, but the sympathetic cannot be thus controlled. Though we may deaden the emotion, we cannot prevent the response to an emotion once evoked. To regulate this we must trust to reserves, inherited and maintained through generations of stable and equable ancestors. "We might modify the dictum that this war will be won by the nation with the strongest nerves, and say it will be won by the nation with the strongest adrenals, for just as character is revealed in the instinctive response which occurs quicker than thought, so the powers of tenacity and endurance may be foreshadowed in the original emotional response."

Action of Flavine and Its Derivatives.—Experiments were made by Tubby and others to determine the minimum lethal dose of proflavine and acriflavine for cats. All injections were made into the external jugular vein under ether or chloroform anesthesia. The effects were largely dependent on the rate of injection. Rapid injection usually produced respiratory failure, the heart continuing to beat. The animal could usually be revived by artificial respiration. The agglutination effect could be reduced to a minimum by giving the injections very slowly. Deep yellow staining of the mucous membranes is produced by the larger doses. It appears within a few minutes, is marked for twenty-four hours, and then fades slowly. As the result of numerous experiments,

the authors found that a dose of 0.01 gm. acriflavine or 0.02 gm. proflavine could safely be given to an adult rabbit. On the same basis a man weighing 154 pounds should take 0.65 gm. of proflavine suitably diluted. In one instance 0.3 gm. of acriflavine was actually given without ill effects (i. e., 300 c.c. of 1:1,000). Proflavine appears to be rather less than half as toxic for rabbits as compared with acriflavine. The influence of flavine injected intravenously on organisms circulating in the blood stream was also investigated. The bacteria used were *Staphylococcus pyogenes-aureus, Streptococcus pyogenes* and *B. Friedländer*. The dose of bacteria injected was estimated to be somewhat above the minimum lethal dose, while that of the flavine was sublethal. The injections of flavine appeared in some experiments to have some delaying effect on the early death of rabbits from staphylococcal septicemia. It would appear, however, that the dose required to produce this effect may later contribute to the death of the animal. The net result is that no definite curative influence can be demonstrated either with proflavine or acriflavine in the treatment of bacillemia due to the organisms injected in these experiments.

Rupture of Rectus Abdominis in Influenza.—A boy, aged 11 years, contracted influenza. His symptoms ran a normal course for the first six days, then he rapidly developed signs of septic bronchopneumonia, with the usual symptoms and temperature at about the 104 F. level. He suddenly developed acute pain and tenderness in the iliac fossa, and a diagnosis of appendicitis was made. It was noticed, however, that the area of tenderness was most acute at the edge of the rectus. It was accompanied by vomiting. Operation was advised. On opening the sheath of the rectus the muscle was found to be torn across completely. It was pulpy and friable under the finger, but there was no extravasation of blood. The clinical features in this case that stood out most prominently were the great dilatation of the superficial veins of the abdomen and thorax, and, secondly, the total absence of bleeding during the operation, two swabs only being used. The appendix was found not to be affected grossly. There were two hemorrhagic areas, and the mesial portion was dilated with fecal contents. The patient improved slowly but steadily.

May 24, 1919, **2**, No. 4995

Jaundice: Types Occurring During War. W. H. Willcox.—p. 869.
Rôle of Sympathetic Nervous System in Diseases of Digestion. W. L. Brown.—p. 873.
*Latent Infection of Healed Wounds. K. Goadby.—p. 879.
*Faradic Stimulation of Nerve and Muscle During Operations. H. Platt and E. S. Brentnall.—p. 884.
*Use of Vaccine in Recent Epidemic of Influenza. F. T. Cadham.—p. 885.
*Blackwater Fever. J. P. Williams.—p. 886.
*Cerebrospinal Meningitis: Clinical Method of Determining Type of Infecting Meningococcus. A. S. Bell.—p. 887.
Hemorrhagic Spinal Effusions. W. P. S. Branson.—p. 888.
Case of Anaphylaxis. J. K. Gaunt.—p. 889
Case of Death from Scorpion Stings. A. Watson.—p. 889.

Latent Infection of Healed Wounds.—Goadby epitomizes further work on postoperative flares with special reference to latent infection in healed and unhealed wounds, comprising cavities containing metal fragments, soft tissues, sequestrums, etc., removed for examination during subsequent operations. In all, 226 wounds have been studied from this point of view: forty-one wounds which had healed and subsequently broken down, twenty healed wounds from which tissues were removed at operations for resection or freeing of nerves, forty closed cavities containing metal fragments, and twelve closed wounds in which bone was excised from joints—total 113, and 113 unhealed wounds from which bone fragments were removed in either the early stages of the wound or later as sequestra. Goadby is convinced that healed gas infection is an extremely common occurrence and a serious factor in the promotion of latent sepsis. Anaerobic infection, though persistent in a large proportion of wounds, does not commonly give rise to secondary gas infection subsequent to operation. The chief cause of temperature reaction, breaking down of wounds at subsequent operations on both healed wounds and sinus cases, which operation was undertaken for the removal of sequestrums, may be attributable to certain types of streptococci of facultative anaerobe habit, which have been demonstrated as lying present in wounds for very long periods. The use of immunization to the streptococci previous to operating on healed and semi-healed wounds, or the removal of sequestrums, very greatly diminishes the risk of temperature reaction and subsequent breaking down of the tissues operated on, and Goadby strongly recommends the routine adoption of streptococcal vaccine in the preparation of wound cases for subsequent operation, especially those involving bone section.

Faradic Stimulation During Operation.—In an experience of 340 operations on peripheral nerves Platt and Brentnall have been impressed by the extreme importance of the exact recognition of the point of origin and distribution of muscular branches arising from nerve trunks in the limits of the operation field. The use of faradic stimulation renders possible the identification of each branch exposed and the confirmation of its physiological integrity. Such information is invaluable.

Use of Vaccine in Recent Epidemic of Influenza.—A vaccine was prepared by Cadham from a strain of streptococcus obtained from an empyema which was added to two strains of streptococci obtained from the nasopharynx of soldiers who arrived from the East suffering from the disease. From time to time strains of streptococci were added; these were taken from the nasopharynx and one strain from blood culture and one from the lungs postmortem. One strain from the pharynx gave cultural characteristics of *Streptococcus viridans*. Cadham believes that the vaccine used as a prophylactic to have been of value. The incidence of pneumonia was less than one half and the mortality rate less than one third in the inoculated as compared with the uninoculated admitted under similar conditions. The mortality rate for the city for the period of time under consideration was 6.28 per thousand; 53.6 per cent. were males, and 75 per cent. of these were at the age known as military age. The mortality rate of the soldier in the city for the same period of time was 2.5 per thousand. Statistics obtained from the physicians as to the use of the vaccine in civil practice appear favorable.

Blackwater Fever.—William claims that the previous history of ten cases seen by him tends to show that the blackwater fever of West Africa is a manifestation of recurrent and inefficiently treated malaria. This is further supported by the fact that immediate and repeated intramuscular injections of quinin, combined with an arsenic preparation injected intravenously and vigorous hydrotherapy, are a satisfactory treatment. The prophylaxis of blackwater fever is essentially that of malaria.

Cerebrospinal Meningitis.—If the standard method of agglutination at 55 C. be employed, seventy-two hours generally elapse between lumbar puncture and determination of the type of infecting meningococcus. With the rapid method described by Bell only twenty to twenty-four hours are needed; homologous curative serum can then be given.

Medical Journal of Australia, Sydney

April 12, 1919, **1**, No. 15

Electrocardiogram of a Case of Myocarditis. W. A. Osborne.—p. 293.
Medical Gleanings in War Time. A. J. Turner.—p. 294.
Case for Inoculation. F. T. Grey.—p. 297.

Annales de Médecine, Paris

May, 1919, **6**, No. 1

*Mechanism of Nystagmus of Aural Origin. L. Bard.—p. 1.
*The Sympathetic Syndrome. F. Ramond and P. A. Carrié.—p. 22.
*Microbian Associations in Influenza. Richet and Barbier.—p. 37.
Chronic Amebic Liver Disease. G. Paisseau and J. Hutinel.—p. 50.
*Icterohemorrhagic Spirochetosis. P. Pagniez.—p. 63.
*The Weak Pulse in Idiots. G. Laroche and G. Richard.—p. 75.

Physiologic Mechanism of Nystagmus.—Bard's work on the sense of gyration has been frequently referred to in these columns. He here explains the physiology of nystagmus of labyrinthine origin from this same standpoint of the physiologic sense of gyration. He explains nystagmus as a double reflex, one part cerebral, the other part cerebellar. In pathologic conditions, the physiologic nystagmus is exaggerated in one direction and suppressed in the other.

The Sympathetic Syndrome.—Ramond and Carrié analyze the symptoms liable to be induced when the sympathetic nervous system is suffering from the action of some poison or other irritation or from inadequate nourishment. The resulting tremor, emotive instability and puffy face are sometimes mistaken for alcoholism or for "emotional nervousness," or the subjects are supposed to have heart disease on account of their tachycardia; or dyspepsia from their disturbances after eating, or an abortive type of exophthalmic goiter is assumed. The tachycardia is not a tachycardia from exertion, and this distinguishes it from actual organic disease of the heart and the tachycardia of convalescence and that with high blood pressure. The tachycardia of the sympathetic syndrome is more like the *névrose tachycardique* to which Gallavardin has recently been calling attention. Only when the most painstaking examination has failed to reveal any local cause for irritation of the sympathetic nerve at any point, are we justified in assuming some general cause, and applying merely general sedative measures, rest, hydrotherapy and other means to soothe the nervous system.

Aerobic Microbian Associations in Influenza.—Richet and Barbier relate that the sputum of their influenza patients contained most frequently the Pfeiffer bacillus associated with the catarrhalis. Next in order of frequency was the association of the Pfeiffer and the pneumococcus, and third in the list, the symbiosis of all three. The Pfeiffer-catarrhalis gave a grave prognosis, and the infections with streptococci always proved fatal. The presence of the pneumococcus did not seem to render the prognosis any graver than with the Pfeiffer-catarrhalis alone. The action of metal salts seemed most pronounced in the pneumococcus cases. A fixation abscess seemed to promote the cure in some of the pneumococcus cases. In conclusion they remark that it may be well to combat these mixed infections by injecting the patient with several of the specific antiserums.

Hemorrhagic Spirochetosis.—Pagniez prefers the term *spirochetose ictérigène*, as the hemorrhagic form is not so much in evidence in France as in Japan. Only in twenty-two of his forty-three cases of this spirochetosis was there any tendency to hemorrhage, and in these cases it took the form of recurring epistaxis, but these were always the severer forms. The blood picture in these graver cases and often in the milder ones showed always a considerable reduction in the number of blood platelets and an exceptionally long coagulation time. This great reduction in the platelet content was evident from the very first, and was independent of the jaundice. This drop in the platelet count is a valuable aid for the differential diagnosis in incipient and dubious cases. The platelets may drop to nine-tenths of the normal number or even below. The red and white cells do not show any such drop in numbers; there is often actual leukocytosis. The platelets finally return to the normal figure, but this may take two or three weeks. Pagniez has not been able to detect a drop in the blood platelets in any other of the principal infectious diseases, such as the eruptive fevers, pneumonia or erysipelas. In typhoid there is a reduction, but it is far from that with this spirochetosis. Only in certain cases of purpura and in pernicious anemia is anything comparable observed, and in these the drop in blood platelets is permanent. He published in 1912 a case of hemorrhagic purpura with complete disappearance of all the platelets from the blood. In the spirochetosis in question, the nonretraction of the clot and the drop in the blood platelets were constant, but not all the cases presented hemorrhage. This suggests that other factors than these are involved in the hemorrhages.

The Feeble Pulse in Idiots.—Laroche and Richard have been impressed with the microsphygmia which seems to be almost the rule in the inmates of a certain asylum for feeble-minded where they have been conducting research on the endocrine system in idiots. They theorize to explain the mechanism and causes of the hypertony of the sympathetic nervous system which seems to be responsible for the microsphygmia.

Archives de Médecine des Enfants, Paris

May, 1919, **22**, No. 5

*Scurvy in Infants. J. Comby.—p. 225. Cont'n.
*Walled-Off Meningitis in Infants. R. Marcland.—p. 251.
Congenital Myxedema. G. Schreiber.—p. 256.
*Lethargic Encephalitis. J. Comby.—p. 259.

Scurvy in Infants.—Comby now has a record of sixty cases of Barlow's disease in infants. In all but two there was a painful pseudoparalysis and in forty-six there were ecchymoses on the gums; those infants without the latter were always too young to have had any teeth appear. There were signs of rachitis in about 50 per cent. The symptoms from the scurvy had been ascribed to everything but the right cause in the overwhelming majority of the cases. He cites a case reported by Rotch in which three surgical operations had been made on the infant before the scurvy had been recognized. A common blunder is to ascribe the symptoms to inherited syphilis alone. Burckhardt relates that in the case of one infant of 11 months the diagnosis wavered only between osteomyelitis and sarcoma of the femur. Puncture brought blood and the femur had fractured, but prompt recovery followed when treatment for scurvy was tentatively applied.

Walled-Off Meningitis.—Marcland expatiates on the cure of an infant of 4 months with severe meningitis and visual disturbances from the pyohydrocephalus. This makes the fifth case of the kind on record, he says, in which recovery followed injection of the meningococcus antiserum directly into both ventricles. The pocketing of the process and the stasis were favored by the long intervals between the intraspinal injections, the child living on a remote farm.

Lethargic Encephalitis.—Comby has compiled the prevailing views on this disease.

Bulletin de l'Académie de Médecine, Paris

April 29, 1919, **81**, No. 17

*Compulsory Notification of Tuberculosis. Hayem and others.—p. 516.
*Therapeutics Judged by Figures. L. Grimbert.—p. 540.
*Unrecognized Amebic Dysentery. M. Labbé.—p. 550.
Alleged Solutions of Mercury Benzoate. M. Delépine.—p. 552.
*Health of Schoolchildren in the Regions Occupied by the Germans. J. Genevrier and G. Heuyer.—p. 553.
*Serotherapy of War Wounds. P. Bouchet.—p. 556.

Declaration of Tuberculosis.—The various medical societies of France have been discussing the feasibility and advantages of introducing compulsory notification of tuberculosis. The Académie has devoted a major part of each meeting recently to discussion pro and con, and the larger part of the *Bulletin* for several weeks has been filled with the reports of the discussions. The resolutions voted were given in the Paris Letter, p. 1781.

Therapeutics Judged by Figures of Amounts Used.—Grimbert adds another ten year report to those that were published in previous decades dealing with the drugs used in the public hospitals of Paris. These reports show the trend of the times in therapeutics. During the last decade there has been a constant decline in the use of antiseptics, iodids, bromids, hydrogen dioxid, glycerin, arsphenamin and cod liver oil. The drugs showing a constant upward trend include neo-arsphenamin, tincture of iodin and hexamethylenamin. The lactic ferments, organ extracts for injection, and certain colloidal metals are still on trial.

Blunders with Amebic Dysentery.—Labbé refers to cases of amebic dysentery which are mistaken for some other form of enteritis as they present an atypical course. Some of the persons affected had never been out of France or even out of Paris. There may never have been actual dysentery, and only the discovery of the ameba in the stools cleared up the cause of the chronic enteritis of up to twenty years' standing.

Health of Schoolchildren in Occupied Regions.—Genevrier has been visiting Lille and the other cities in the *régions libérées*, on behalf of the Ligue d'hygiène scolaire. He reports that the results of four years of undernourishment and overwork demand immediate relief for the schoolchildren. See Paris Letter, p. 1558.

Polyvalent Serotherapy in Wounds.—Bouchet emphasizes the importance of a polyvalent antiserum in treatment of

wounds and other injuries in war and in peace. He urges its use in traumatic shock, in septicemic conditions, in traumatic infectious processes and industrial accidents. The antiserum with which he has been working is that made by Leclainche and Vallée. In 420 war cases the traumatic shock became much attenuated after injection of the antiserum. In seventeen cases of hemophilia it had a decidedly favorable action, as also in large numbers of ordinary peace injuries.

Progrès Médical, Paris

Feb. 15, 1919, **34**, No. 7

Aerial Concussion. H. Damaye.—p. 59.
Hematemesis Without Ulcer. P. Batigne.—p. 62.

Feb. 22, 1919, **34**, No. 8

*Nature of Cancer. J. Audrain.—p. 69.
*Elimination of Procain After Spinal Anesthesia. H. P. Achard.—p. 70.
Technic for Bacteriologic Diagnosis of Tuberculosis. Tilmant.—p. 70.

March 1, 1919, **34**, No. 9

Streptococci in Influenza Sputum. J. Lochelongue.—p. 79.
Causative Agent of Trench Fever, Influenza and Nephritis. A. Bernard.—p. 79.

The Nature of Cancer.—Audrain comments on the resemblance between the action of the cancer cell and that of the syncytium cell. The latter also destroys all before it until it reaches the vessels in the ovum, and thus brings the young vessels into the pools of blood. But it stops when this is accomplished, whereas the cancer cell keeps on. Audrain suggests that when the cells of the organism are kept in a state of abnormal excitation, it is easy to conceive that after some trauma certain cells may start on a destructive course, like that of the syncytium and, escaping from control, develop cancer. Syphilis seems to keep the tissues in a state of abnormal excitation, and hence this may be a factor in malignant disease although possibly not until the third and fourth generation. He asks in conclusion whether some abnormal general or local superactivity cannot be determined as having long preceded the development of the cancer.

Elimination of Procain Injected Intraspinally.—In twelve of the fifteen cases studied by Achard the procain was eliminated between the second and third hours, and had all been recovered by the sixth hour. The maximum was always at the second hour. The cases in which the elimination proceeded more slowly were the only ones presenting headache.

Revue Médicale de la Suisse Romande, Geneva

March, 1919, **39**, No. 3

*Laws on Building and Sanitary Inspection. E. Olivier.—p. 97.
*Undernourishment and Famine Edema. R. Guillermin and F. Guyot.—p. 115.
Dysentery in Southern Switzerland. M. Chapuit.—p. 120.
*Recovery from Multiple Tuberculosis. R. Burnand.—p. 127.

Ordinances on Building and Building Inspection.—Olivier discusses the proposed revision of the legislation on this subject, saying that the principle to be followed is that the rights of property are always subordinate to the rights of life.

Undernourishment and Famine Edema.—Guillermin and Guyot remark "Every physician now and then encounters a case of inanition; it may be an insane person, a cancer patient, a hysteric (or a suffragette) suffering from complete exhaustion from lack of food, but never, until 1915, would any physician have imagined that in the twentieth century he would ever behold the spectacle of famine ravaging whole populations, recalling the famous plagues of Egypt and the lamentable pictures described by our ancestors." Even in Switzerland physicians have noticed a general reduction in the weight of their clients, and the lesser proportion of cases of obesity. The scarcity of sugar and fats is mainly responsible for this. It recalls Erb's saying that with a course at Carlsbad in treatment of obesity, the fact that the meals are served à la carte, in extremely small portions, and at a very high price, explains the benefit from the stay there at least as much as the waters. They describe some cases of "famine edema" in French prisoners of war seen at Berlin and elsewhere, saying, "It suggested the clinical picture of a cardiac lesion with failing compensation. It affected mainly men who had to do heavy work on a ration of from 800 to 1,200 calories. These calories are drowned in food containing 15 per cent. and more of indigestible cellulose, with very little fat and a maximum of 50 gm. of albumin per day. The dropsy, anemia, apathy, muscular weakness and nervous exhaustion were associated with the *facies pestica*." Dogs are said to die when they lose 40 or 50 per cent. of their weight, but with the famine edema a loss of 40 per cent. was common. Digitalis has no influence on this edema. The number of fatal cases in Poland and elsewhere in which no tendency to scurvy was noted seems to indicate that it is a distinct morbid entity.

Recovery from Pulmonary Plus Intestinal Tuberculosis.—Burnand says that the case here reported teaches that in tuberculosis one must never give up hope, and that one may venture even quite hazardous operations when the patient is otherwise doomed. This patient was a woman of 27, and the pulmonary lesion seemed to be arrested by an artificial pneumothorax kept up for twenty-six months. The ten ulcerations found on the large intestine were excluded from the intestinal tract by severing the ileum 20 cm. from the valve of Bauhin, and reinserting it in the lower portion of the descending colon. After the laparotomy all the symptoms subsided and three years and a half passed with apparently perfectly restored health. Then came an intercurrent gastric fever and she wrote to Burnand that she had begun to cough and expectorate profusely and had fever and hemoptysis. He telegraphed her to return to his care at Leysin for another course of treatment. A large cavity was evident in the outer part of the right lower lobe and the pulse was bad. Several attempts to induce pneumothorax failed, while the general toxic condition was growing constantly worse during the two or three months while sanatorium treatment was vigorously applied. Then nine ribs were resected through an incision parallel to the spine, from 8 to 15 cm. being cut from each rib, under general anesthesia, with the aid of the pulmotor. The fever subsided almost immediately, and in three months no further tubercle bacilli were to be found, and at date of writing, eleven months later, the patient shows all the appearances of a clinical cure. Burnand ascribes the success of the plastic operation to the fact that the cavity was a grave localized suppurating lesion rather than a focus in full evolution.

Gazzetta degli Ospedali e delle Cliniche, Milan

April 3, 1919, **40**, No. 27

*Complications of Influenza. F. Bindi.—p. 234.

Complications of Influenza.—Bindi describes both medical and surgical complications as he encountered them, including empyema, of which he has had 13 cases. Five of the patients died, including one with what seemed to be a metastatic peritonitis. All recovered in 10 operative cases of mastoiditis; one was in a child of 4. There were 3 cases of suppurating and 2 of nonsuppurating parotitis. Among the medical complications was a case of ulnar paralysis, one of paraplegia, and some of melancholia with ideas of persecution.

Riforma Medica, Naples

April 19, 1919, **35**, No. 16

Artificial Pneumothorax and Thoracentesis in Treatment of Hemothorax. G. Bernabeo.—p. 310.
Ethyl Chlorid General Anesthesia for War Surgery. L. Caforio.—p. 313.
*Course of Typhoid and Paratyphoid in the Vaccinated. C. Pezzi.—p. 314.
Recent Literature on Traumatic Proliferation of Adipose Tissue in Knee. E. Aievoli.—p. 318.
Recent Literature on Cholesterol in the Blood. G. Moscati.—p. 319.

Course of Typhoid in the Vaccinated.—Pezzi reports that at Milan during 1917 the mortality among hundreds of soldiers with the typhoid bacilli found in the blood was 23.4 per cent. among those who had been given antityphoid vaccination while in the unvaccinated it was 27.8 per cent. In 1918 the corresponding figures were 18.5 and 14.7 per cent.

The death rate was thus slightly higher in the vaccinated over the two years. In one group of 124 vaccinated, 10 per cent. had relapses and only 2 per cent. in 104 nonvaccinated. The total mortality in the 438 cases of typhoid or paratyphoid or both together was 18 per cent. in the unvaccinated; 10.8 in the vaccinated. In the larger sense of typhoid plus paratyphoid, the mortality was reduced by the vaccination.

Rivista Critica di Clinica Medica, Florence

March 29, 1919, **20,** No. 13

*Radiologic Signs of Ascites. L. Siciliano.—p. 145.

April 12, 1919, **20,** No. 15

Bacillary Dysentery. A. Bizzarri.—p. 169.—Conc'n.

Radioscopy with Ascites.—Siciliano describes the roentgen picture seen when the loops of intestine are floating in a fluid. By raising the pelvis or turning on the side it may be possible to detect this floating appearance in some part of the abdomen when the intestines in other parts are bound down by adhesions. This radioscopy has to be done an hour or so after ingestion of the contrast emulsion.

Tumori, Rome

October-December, 1918, **6,** No. 4. Pub'd April 28, 1919

*Cytotoxic Serums and Tumors. P. Sisto.—p. 253.
*Experimental Tumors of the Brain. D. B. Roncali.—p. 269. Cont'n.
*Cancer of the Stomach. G. Perez.—p. 298.

Action of Cytotoxic Serums on Development of Tumors.—Sisto reports experiments on white mice inoculated with cancer after or at the same time with subcutaneous injection of a cytotoxic serum. The latter was obtained from rabbits that had been treated by intravenous injection of fresh spleen, testicle or liver tissue (triturated in saline) to produce a cytotoxic serum. The spleen-cytotoxic serum showed a pronounced action, the tumor grafts taking root and flourishing exceptionally well in these animals. This seems to indicate that one of the functions of the spleen is to protect against malignant growths. Brancati and Korentschewsky have reported experiments showing that an acquired immunity to tumors was lost after removal of the spleen. This was confirmed in Sisto's mice. Serafini has also reported similar experiences after ligation of the splenic blood vessels. Sisto reports further that liver-cytotoxic serum has a favoring action on tumor growth, while testicle-cytotoxic serum distinctly checked or prevented the growth of the malignant tumor cells. A large number of charts show the findings at different intervals.

Experimental Brain Tumor.—Roncali has published a large number of articles on the parasitic origin of cancer, and now reports that he has succeeded in inducing experimental gliofibro-endotheliomas in the brain. He offers this as a further contribution to the parasitic origin of carcinomatous growths. He introduced the endotoxins and exotoxins of blastomycetes inside the skull of twelve dogs. Actual carcinomas developed in consequence in the first group of five dogs, as he shows by the microscopic findings. In conclusion he emphasizes that the elements of cancer tissue represent at first merely a defensive reaction, but their biochemistry becomes so modified in their struggle for existence with the parasites that they acquire the properties of a parasite and take root anew wherever they may land. He is director of the Instituto di Patologia Speciale Chirurgica of the University of Padua.

Resection of Stomach for Cancer.—Perez reports the ultimate outcome in 12 patients of 20 given operative treatment in 1913-1914 for gastric cancer. There was nothing to suggest syphilis in more than 2 and alcohol could be incriminated only in 3. In the majority there was a history of chronic gastric disturbance, suspicious of gastric ulcer in some cases, polyposis in one, but in no case was there a history of trauma. The father of one woman had died of gastric cancer and the mother of one man of esophageal cancer; in 2 others there was a family history of gastric ulcer. He gives a minute study of the anatomic lesions found as compared with the symptoms, the functioning of the stomach, the radioscopic findings and the ultimate outcome. The results of his extensive resection were very encouraging. Even those in advanced cachexia bore the operation well. One of the patients succumbed to pneumonia, which is the most to be dreaded of all operative complications. One woman in profound cachexia seems in ruddy health now, a year later. A palliative gastro-enterostomy in inoperable cases may be followed by quite long survival as some cancers are very slow in growth.

Brazil-Medico, Rio de Janeiro

March 22, 1919, **33,** No. 12

*To Correct Retrodeviation of the Uterus. J. Adeodato.—p. 89.

Ligamentary Hysteropexy.—Adeodato declares that the Alquio-Alexander-Adam operation by way of the inguinal canal is not surpassed by any other technic from the anatomic and physiologic standpoint. But when the uterus requires operative measures to bring it into its normal position, the shortening of the ligaments is best done through an abdominal incision. For this, he endorses a modification of Gilliam's method which avoids the danger of possible ileus that is liable with the Gilliam (or Doléris) technic. It occurred in one of his cases nine days after the operation. A loop of intestine had slipped down into the pocket formed in front of the uterus by the round ligament sutured to the aponeurosis of the rectus muscle in the Gilliam operation. The operation otherwise always gives ideal results. To avoid this drawback, he fastens the vertex of the loop of the round ligament not to the median line but to the side of it, striving to keep the fundus of the uterus apart from the incision in the peritoneum, to prevent development of adhesions. If the angle of flexion will not yield to this moderate shortening of the ligaments, he prefers to supplement it with an operation on the isthmus rather than to bring up the fundus too close to the sutured incision in the peritoneum. Local and general treatment before and after the operation is necessary to free the patient from all her chronic disturbances from retrodeviation.

Medicina Ibera, Madrid

March 15, 1919, **6,** No. 71

Radium Treatment of Superficial Cancer. E. A. Sainz de Aja.—p. 229. Continuation.
*Placenta Praevia Plus Eclampsia with Recovery. J. P. Brihuega.—p. 233.
Calculus in the Urethra; Three Cases. C. de San Antonio.—p. 235.

Placenta Praevia Plus Eclampsia.—Brihuega's patient had only recently recovered from influenzal pneumonia at the seventh month of pregnancy. It had been treated with mercuric chlorid by the vein and the following month profuse hemorrhages and eclampsia compelled premature delivery. The child was born in asphyxia and died in two hours.

Plus Ultra, Madrid

December, 1918, **1,** No. 6

The True Mechanism of Skiascopy. M. Márquez.—p. 299. Conc'n.
Simplified Technic for Wassermann Test. J. Sievert.—p. 305.
Classified Abstracts with Specialist Comment.—p. 308, etc.
Sections of Bundle of His. Calandre y Carrasco.—p. 314
*Dentition. E. Suñer.—p. 320.
Spinal Anesthesia. F. Herrer.—p. 326.
*Radium Treatment. L. R. F. Sierra.—p. 334.
*Radiologic Diagnosis of Gastric Cancer. E. P. Guillén.—p. 336.
*Extraction of Bullet in Parietal Lobe. W. L. Albo.—p. 347.
Prevailing Epidemics at Sevilla. A. Salvat.—p. 350.
Teaching of Legal Medicine in Spain. Lecha-Marzo.—p. 354.

Teething.—Suñer reiterates that the teething period in infants is not pathologic but is a period of stress and adjustment, like puberty and the menopause. Inherited taints may first make themselves manifest at such periods, and various pathologic conditions otherwise may prove refractory to all treatment until the stress of this critical epoch is somewhat mitigated.

Radium Treatment of Superficial Cancer.—Sierra relates that he has realized a complete cure in the last eight years in all but three of the more than 100 cases of epithelioma of the skin in which he has applied radium treatment. The three refractory cases had been previously given roentgen

treatment and had had a radiodermatitis. He gives the details of a few typical cases, and warns that roentgen treatment may aggravate the cancer, and it is then extremely difficult to arrest its course.

Radiologic Diagnosis of Gastric Cancer.—Guillén gives a number of colored illustrations showing the interpretation of the various roentgen findings.

Bullet in Parietal Lobe.—Albo relates that the hemiparesis and dysarthria subsided after removal of the bullet from the left parietal lobe under roentgen control. The case is illustrated.

Prensa Médica Argentina, Buenos Aires

March 30, 1919, **5**, No. 30

*The Schick Reaction. P. de Elizalde.—p. 293.
*Tuberculin Tests of Recruits. J. A. López.—p. 295.
Tuberculoma in Gallbladder. P. M. Barlaro and E. Olivieri.—p. 297.
Association of Ameba and Trichomonas. Barlaro and Mujica.—p. 298.
Nerve Elements in Auriculoventricular Bundle. P. Rojas.—p. 299.

The Schick Reaction.—De Elizalde applied the Schick test to 673 children in an asylum and to 221 in a children's hospital and compares the findings with those reported by Kolmer and others in THE JOURNAL. He classifies the reaction by ages, commenting on the negative reaction in very young infants as evidently due to the infants' sharing the mothers' immunity. This transmitted immunity is gradually lost, so that by the age of 3 the maximum of reaction is obtained. After 3, natural immunity is acquired so that only from 5 to 15 per cent. of adults give a positive response to the Schick test. The reliability of the test is confirmed by the experience that in the whooping-cough ward 15 of the children gave a positive reaction and the other 23 showed no response. Diphtheria was imported into the ward but only 5 of the children contracted it and these were all in the positive group. His experiences confirm the harmlessness of the Schick test, and also the absolute independence of the reaction from the condition of the general health. The presence of other acute or chronic infectious diseases does not seem to modify the reaction.

Tuberculin Test for Recruits.—López has adopted Vitón's method of extremely minute doses of tuberculin in testing for and treating pulmonary tuberculosis in recruits, and lauds the fine results obtained. It is possible by this means to weed out the tuberculous new arrivals, and to cure many of the soldiers. (Vitón's extremely minute doses were described in these columns recently, page 1581.) López insists that this method of ultra small doses of tuberculin at four day intervals can be applied by any practitioner and the results to date have nearly always surpassed all anticipations.

Progresos de la Clínica, Madrid

February, 1919, **7**, No. 74

*Trench Fever. A. Piga and L. Lamas.—p. 49.
*Reconstruction of the Face. A. Cortés Lladó.—p. 64.
*Eclampsia and Evacuation of the Uterus. Vital Aza.—p. 89.
*Syphiloma of the Eyelids. F. Couce and F. Poyales.—p. 92.

Trench Fever.—Piga and Lamas review the various publications on trench fever (Wolhynia fever, five day fever) and emphasize that it may appear elsewhere than in the trenches, and that physicians should be on the alert to recognize it. They do not regard the means of transmission of the disease as having been definitely ascertained although transmission by lice is most probable. Treatment to date can be only symptomatic .

Reconstruction of the Face.—Lladó's twenty-five illustrations show the guiding principles in treatment of deformity resulting from war or other wounds of the face. He describes the French, Italian and other methods of plastic facial surgery, specifying the class of indications for each. He studied the methods directly in the hospitals in France and elsewhere.

Eclampsia and Evacuation of the Uterus.—Aza remarks that evacuation of the uterus removes the source of the toxins but does not suppress the toxins circulating in the body fluids and the toxins fastened in the tissues. Hence evacuating the uterus is not certain to arrest the convulsions. The convulsions may even develop for the first time after delivery, or the woman may die after delivery before the convulsions have had time to develop. When the practitioner is confronted with a case of eclampsia in a woman on the point of being delivered, he should of course hasten delivery if the cervix is sufficiently dilated. But the general practitioner, in the home, is not able always to do cesarean section at a moment's notice, and the injury to both mother and child from forcible extraction through the imperfectly dilated cervix is such that the remedy is worse than the disease. Hence Aza insists that the practitioner should sometimes concentrate his efforts on medical measures, venesection, morphin, etc. He should not attempt surgical measures unless they can be rapid and harmless.

Syphilitic Lesions in the Eyelids.—A large color photograph reproduces the tertiary syphilitic lesion of the inner angle of both eyes, an actual syphiloma in the right eye. The man of 40 has two healthy children; the primary chancre was acquired at 30 and given a course of mercurial treatment. There had been no other signs of syphilis until these lesions in the eyelids developed.

Reforma Médica, Lima

April, 1919, **5**, No. 56

Malta Fever in Lima District. R. Flores.—p. 54.
Eugenization of America. C. E. Paz Soldan.—p. 54.

Repertorio de Medicina y Cirugía, Bogotá

April, 1919, **10**, No. 7

*Umbilical Hernia. J. M. Montoya.—p. 338.
The Vitamins. E. Gómez.—p. 348.
*Syphilis of the Nervous System. E. Campo.—p. 364.

Umbilical Hernia.—Montoya discusses umbilical hernia in children, saying that it is more common than inguinal hernia but, owing to the tendency to a spontaneous cure, it seldom reaches the surgeon. He has operated in thirty-two cases in the last six years. He found in one cadaver that the intestines had formed a hernia into the cord at birth; in such a case the bowel should be reduced at once and the cord ligated. For ordinary umbilical hernia, after reducing the hernia, he straps two-thirds of the abdominal wall with adhesive plaster, first taking up a fold the entire thickness of the wall, with the umbilicus and hernia in the depths of the fold. The adhesive plaster holds the fold firm, allowing the ring a chance to heal. The plaster is renewed by the physician himself every week or two; the child can be bathed as usual in the interim. This method obviates any danger of stretching the ring, which is liable when a small pad is used. He adds that these mechanical measures have to be long kept up; a year is none too long, provided the ring and the hernia show no tendency to grow larger. With careless or negligent parents and when the hernia is exceptionally large, operative measures are preferable and he reviews the various technics available. He applied Mayo's method in eight cases, including one in which the girl of 7 had a return of the hernia six months after it had been treated by merely resecting the ring and freshening the edges of the muscle. He never uses general anesthesia for it in young children; the operation is completed in about six minutes. He gave the older children a few whiffs of ethyl chlorid to supplement the local anesthetic.

Syphilis of the Nervous System.—Campo remarks that he often encounters persons who are victims of tabes or other syphilitic affections of the central nervous system who yet had taken supposedly thorough treatment according to the older methods. The action of the syphilis virus is sometimes reenforced by certain predisposing factors such as an inherited taint, fatigue of the brain and spinal cord, preexisting intoxications, traumatism and cold. These predisposing causes explain why nervous syphilis is more apt to develop between 20 and 40, is more frequent in men than in women, and is more prevalent in the city than in the country. The evidence on hand seems to indicate that the nervous system becomes infected during the secondary period. A mild meningitis may exist for years without making itself

manifest, but it may induce infiltration in the meninges close to the posterior roots, and this may entail the clinical picture of tabes from the degeneration which follows the compression of the roots. He reviews the clinical picture of cerebral syphilis, and outlines our knowledge on the subject.

Semana Médica, Buenos Aires

March 27, 1919, **26**, No. 13

*Serotherapy of Tuberculosis. J. Howard.—p. 305.
General Review of Congestions of the Uterus. Castaño.—p. 313.
*Technic for Resection of Megacolon. A. G. Gallo.—p. 318.
*Postoperative Dilatation of Stomach. O. Copello.—p. 323.
The Bases of a Scientific Education. J. Méndez.—p. 325.

Serotherapy of Tuberculosis.—Howard explains that the bacterium acts on the cells gradually, and in time trains them to produce antibodies. We have thus a durable immunization. Toxins, on the other hand, make a sudden, violent attack on the cells, and a chemical neutralization may follow, but the cells do not get trained, and consequently the immunization is comparatively transient. Vaccination against smallpox lasts for years, while vaccination with an antitoxin protects for only a few months. Immunity, he reiterates, is a process of cellular pedagogy. To realize it, he prepares an antiserum by successive passages of antigens and antibodies through animals, keeping always below the level of supersaturation. A number of cases of tuberculosis are described given a course of this antiserum treatment with very promising results. Full details of the preparation of the antiserum are to be given in a later article. He published in 1916 similar experiences with an antiserum for typhoid but explains that the brief course of typhoid does not allow time for the education of the cells.

Operative Treatment of Megacolon.—Gallo's remarks apply to removal of the sigmoid-rectal portion of the large intestine. He advocates both an abdominal and a perineal incision, and reviews the preferable technic with either long or short colon and mesentery.

Acute Dilatation of the Stomach.—Copello describes the case of a man of 50 requiring an interval appendicectomy that did not take over twenty minutes. The next day severe symptoms of acute dilatation of the stomach developed. The forty-fourth hour after the operation the stomach was rinsed out and the patient was turned to lie on his stomach. The vomiting stopped, but the symptoms returned again later, and yielded anew to the same measures. The pulse kept good throughout and there was no tachycardia. The vomiting was uncontrollable and the vomit was bloodstained at first. Peritonitis was excluded by the absence of pain and tenderness in the abdomen, although the fever suggested peritonitis, especially on the third and fourth days, but it subsided each time after lavage of the stomach. On account of the appendicectomy incision, he refrained from postural treatment except when absolutely required.

Siglo Médico, Madrid

April 12, 1919, **66**, No. 3409

*Hemorrhages. A. Morales.—p. 289.
Advantages of Mountain Sanatoriums for the Tuberculous. B. H. Briz.—p. 292.
Chrysophanic Acid in Dermatology. Sicilia.—p. 293.
Introduction to Study of Operative Surgery. J. G. Capdevila.—p. 294. Cont'n.

Hemorrhages.—Morales describes a number of cases of alarming hemorrhage and the various means he improvised to meet unusual conditions. In one case the vessel broke on which an obese woman had seated herself, and the jagged edges of the fragments cut one of the external pudic arteries. Nothing arrested the hemorrhage until with a large curved needle, threaded with silk, the ends of the artery in the wound were brought together by this *acufilopresion* as he calls it. In one hemophiliac the hemorrhage after extraction of a molar resisted all measures until the cavity was seared with the actual cautery. Even this failed on another occasion, but the hemorrhage was finally arrested by *acufilopresion*, passing the silk over two segments of rubber tubing after lining the cavity with a fold of mucosa from the inside of the cheek. The loop of silk embraced all the mucosa surrounding the alveole. He has found hamamelis a valuable adjuvant in treating rebellious hemorrhage. It seems to act both by inducing coagulation and by contracting the muscular fibers of the blood vessels. In experiments on a dog, the femoral artery on each side was severed, and the hemorrhage arrested at once by application of a bag of ice on one side and by the hamamelis extract on the other. Then he applied a hot compress to the abdomen; this started up the hemorrhage anew on the ice-bag side, but not on the hamamelis side.

Mededeelingen u. h. Genessk. Laboratorium te Weltevreden, Java

1919, No. 1

*Chenopodium Cultivated in Java. P. C. Flu, C. D. de Langen and F. Weehuizen.—p. 1.

Java Chenopodium.—The experiments on dogs and the clinical experiences related testify that a variety of *Chenopodium ambrosioides* grown in Java, has a very powerful expulsive action on ankylostomas in man and dog. It should be followed with a laxative in two or three hours. All the dogs examined in Java were found infested with *Ankylostoma caninum*.

Nederlandsch Tijdschrift v. Geneesk. Amsterdam

March 8, 1919, **1**, No. 10

The Medical Course in England. G. Van Rijnberk.—p. 746. Cont'n.
*Racemose Phlebosarcoma. A. Van Ree.—p. 759.
*Treatment of Placenta Praevia. G. C. Nijhoff.—p. 768.
Embolism of Pulmonary Artery. A. J. Krijger.—p. 776.

Racemose Phlebosarcoma.—Van Ree's patient was an otherwise healthy woman of 42; the sarcoma in the leg resembled in every respect a group of thrombosed varicose veins. The woman had noticed for some years a small bunch on the inside of her left leg, but for a long time there was no pain. The conglomerate of what looked like thrombosed veins was finally resected, but the contents proved to be sarcomatous, and the leg was amputated. There has been no sign of recurrence during the fifteen months to date. Illustrations are given of this peculiar racemose spindle-cell sarcoma, evidently starting in the intima of the vein, and the case is compared with the few other cases on record of cancer starting in a blood vessel.

Placenta Praevia.—Nijhoff analyzes the experiences in 160 cases of placenta praevia at Groningen since 1898. The mortality of the women was 8.2 per cent. and in four of the thirteen fatal cases the woman was nearly exsanguinated when first seen. The death rate of the children was 44 per cent. These figures compare favorably with Doederlein's compilation of 5,615 cases with 8.05 per cent. mortality for the mothers and 54 per cent. for the children. The lessons learned from this material impress the advantages of cesarean section in serious cases with profuse hemorrhage at the beginning of the first stage of labor. Otherwise it is better to follow the old method of rupturing the membranes, with version, when the os is well dilated. We may well be content if we can get the mortality of the mothers reduced to 5 or 6 per cent. and that of the children to 25 per cent. The details of his cases are tabulated.

March 15, 1919, **1**, No. 11

The Medical Course in England. G. Van Rijnberk.—p. 821. Cont'n.
*Sinusal Arrhythmia. W. C. Aalsmeer.—p. 825.
*Coccobacillus Process on Hand. W. L. L. Carol.—p. 835.
*Inhibition of Agglutination by Fresh Serum. H. G. M. Dikshoorn.—p. 843.
Certain Requirements for Practice. I. C. Idenburg.—p. 846.

Sinus Arrhythmia.—Aalsmeer reviews the literature on this subject and describes in minute detail a case in which slight tachycardia was accompanied with sinus arrhythmia evidently traceable to some infectious process. Under digitalis the sinus arrhythmia grew worse and the conduction of the impulse became defective until the drug was dropped. Both the accelerator and the vagus systems seemed to be functioning perfectly, and the cause of the disturbances was evidently some change in the reacting organ itself. The prognosis in this tachycardia form is not so grave as in

cases with bradycardia. With the latter, the heart action might become completely arrested.

Superficial Infectious Gangrenous Process.—The gangrenous process on the back of the hand of a man of 60 was traced to symbiosis of *Staphylococcus aureus* and *Bacterium lactis aerogenes.*

Inhibition of Agglutination Test by Fresh Serum.—Dikshoorn discusses van Loghem's assertion that the inhibition which sometimes occurs when fresh serum is used for the agglutination test is due to the presence of some nonspecific substance. By heating or by letting the serum age, this inhibiting effect is overcome. Dikshoorn's experiences with the blood of men vaccinated against typhus showed that the inhibiting action was most pronounced the greater the agglutinating potency. This suggests that probably the increase in the agglutinating property is due to an increase in the amboceptor content and that this, in connection with the complement, in a strong concentration prevents the binding of the agglutinins. With fresh serum there seems to be a mutual binding of amboceptor, complement and antigen which interferes with agglutination.

Hygiea, Stockholm

March 31, 1919, **81,** No. 6

The Food in Germany During the War and at Present. J. E. Johansson.—p. 257.
*Transmission of Influenza. L. Ehrenberg.—p. 297.

Transmission of Influenza.—Ehrenberg discusses the possible reasons why in the Falun hospital 90 per cent. of the personnel developed influenza as a total of 143 influenza patients were being treated, while none of the other patients in the hospital contracted the disease. Linroth attributes their escape under these circumstances to a kind of immunization, but Ehrenberg thinks it is more plausible to assume that the lack of repeated opportunities for infection is the more probable decisive factor.

Svenska Läkaresällskapets Handlingar, Stockholm

March 31, 1919, **45,** No. 1

*Dietary in Large Hospitals in Sweden. S. Köhler.—p. 1.

The Food in Large Hospitals.—The eighty-two pages of Köhler's study of the various hospital diets, the waste, and proposed improvements are accompanied by numerous tables.

Ugeskrift for Læger, Copenhagen

April 17, 1919, **81,** No. 16

Influenza and Pulmonary Tuberculosis. C. H. Würtzen.—p. 673.
*Influenza in Iceland. V. Erlendsson.—p. 683.

Influenza in Iceland.—Erlendsson cites experiences at Iceland showing that the severe epidemic of influenza which befell the land in November, 1918, did not differ materially from the disease as observed elsewhere, and it spread in the same universal manner as in other countries, apparently regardless of isolation and quarantine.

April 24, 1919, **81,** No. 17

*Contusion of a Hernia. S. Hindse-Nielsen.—p. 713.
Total Pneumothorax Without Symptoms. H. Lindholm.—p. 723.
Health Record of Famous Romans. E. Ravn.—p. 735. Conc'n.

Contusion of Hernia.—Hindse-Nielsen reports four cases of rupture of the small intestine from contusion of a hernia. Only one of the patients survived the resulting peritonitis. The danger of such an eventuality should turn the scale in favor of operative treatment of simple hernia. The prognosis of rupture of the bowel in the hernia is somewhat better than rupture otherwise, if the herniated loop does not retract into the abdomen. He cites some statistics showing spontaneous recovery in 4 per cent. of 200 cases and recovery after operation in 28 per cent. of 469 operative cases. In any event, a trauma in the region of a hernia calls for extremely careful examination and exceptional caution.

Upsala Läkareförenings Förhandlingar

Sept. 10, 1918, **23,** No. 5-6

*Lymphogranulomatosis of Tuberculous Origin. C. Näslund.—p. 229.
*Determination of Solid Contents of Urine. G. J. Blohm.—p. 283.
*Change in Size of Arm under Massage. S. Arnell.—p. 307.
*Action of Massage on the Vessels. R. Friberger.—p. 315.
Action of Artificially Carbonated Baths. T. Sondén.—p. 350.
Simultaneous Vision of Contrasting Colors With Abnormal Trichromatic Vision. C. Grill.—p. 367.
*Stain for Diphtheria Bacilli. U. Quensel.—p. 384.
Influence of Massage on Pulse and Blood Pressure. R. Friberger. —p. 387.

Tuberculous Origin of Lymphogranulomatosis.—Näslund found nothing to suggest a tuberculous origin at necropsy of a typical and extreme case of lymphogranulomatosis in a boy of 4. None of the internal organs or tissues showed any changes even suspicious of tuberculosis. An emulsion of one of the lymphogranulomatous mesenteric glands was injected into the peritoneum of two guinea-pigs and both died of generalized tuberculosis. The tubercle bacilli found in the guinea-pigs were true to the human type, as also those recovered from white mice and rabbits also inoculated with glandular tissue from the lymphogranulomas. The lesions found in the animals corresponded to those induced with ordinary human tubercle bacilli, but some of the rabbits developed also certain changes which seemed to resemble in every respect typical lymphogranulomatosis, along with the ordinary typical tuberculous changes. The extensive researches reported, with four pages of bibliography, set solid, all tend to confirm the assumption that lymphogranulomatosis is a form of tuberculosis, the individual reacting forces determining the form in which the disease manifests itself. The tubercle bacilli involved are not necessarily attenuated in virulence.

Determination of Solid Contents in Urine.—Blohm's research seems to demonstrate that the refractometer technic gives more reliable findings than the specific gravity or other coefficients. In the sixty-three samples of urine tested, free from albumin and sugar, the range of solid contents was from 4.9 to 72 gm. per liter.

Effect of Massage on the Vessels.—Arnell has the arm placed in a cylinder of water before and after massage, the displacement of water indicating whether the arm has increased in size under the massage. Very little difference was apparent, and even this was not constant. The tests were made on fifteen persons from 18 to 27 years old, including eight healthy subjects.

Friberger's extensive experiments confirm that the slowing of the pulse and the hyperemia when an extremity is given a hot air bath far surpass what can be induced in this line by packing the extremity with hot sand bags; the effect with the latter of equally prolonged action (fifteen minutes) is very weak in comparison, and even this was realized only in 33 per cent. of the twelve persons tested. The diversity of the response in different persons to the tests was striking. Friberger reports also the effect on the systolic blood pressure and pulse rate of mud baths and soap massage baths. In six healthy young men no effect in this direction was apparent, but in fourteen persons from 20 to 63 years old, with chronic rheumatism, sciatica or polyneuritis, there was often a moderate rise in the blood pressure. There seemed to be some connection between the degree of pain induced by the massage in these cases and the amount of the increase in the blood pressure. He theorizes to explain this, and adds the practical warning that the possibility of thus raising the blood pressure should be borne in mind in cases in which there is reason to fear cerebral hemorrhage.

Simplified Stain for Diphtheria Bacilli.—Quensel says that with this stain all the slides with the smears can be left standing in the jar holding the stain until convenient to examine them. The stain keeps well, and the jar of stain can be used over and over again for months. It stains the nucleus as instructively as the Neisser contrast stain. He adds to a concentrated aqueous solution of methylene blue an equal amount of a 10 per cent. aqueous solution of cadmium chlorid. A precipitate is thrown down, and this precipitate is dissolved in water, when it is at once ready for use. The loopful of the culture is spread in a drop of the stain on a slide and air-dried, then placed in the jar of the stain for from two to five minutes or longer. It is then rinsed with water and treated for fifteen seconds with Lugol's solution, and rinsed again.